Clinical Lecture ON A CASE OF ACUTE MYELITIS, AND A CASE OF ADULT SPINAL PARALYSIS.

Delivered at the Liverpool Royal Infirmary, March 15, 1878.

BY T. R. GLYNN, M.B. LOND.,
PHYSICIAN TO THE INFIRMARY.

(Concluded from p. 595.)

IN the first of the cases I have brought before you, the rapid annihilation of the functions of the lower part of the cord was no doubt due to an inflammation, limited longitudinally, but extending transversely across it. The position of the lesion was determined by the extent of the motor and sensory paralyses. The extinction of reflex excitability and electro-contractility seemed to point to extensive destruction of grey matter rather than to simple interruption of continuity. In a week or ten days, however, reflex movements of the legs could be provoked, and the muscles became more irritable to faradaic and galvanic currents; it is therefore probable that the diseased focus, by irritation, for a time exerted an inhibitory action on the centres below it. In the case of the girl, J. A——, recently admitted—with paralysis of the legs, intercostal and abdominal muscles and sphincters, and with anæsthesia as high as the nipples, from transverse myelitis opposite the first dorsal vertebra,—there were similar phenomena; reflex movements of the legs could not be excited, and the muscles responded very feebly to either current. The only pain our patient experienced was at the onset of his illness and before the paraplegia became marked, it was short in duration, and described as a griping in the bowels. I have before heard patients with myelitis complain of griping pain; it seems to be perfectly distinct from the more common feeling of constriction. The absence of pain indicated that the membranes were not implicated. The absence of constitutional disturbance was remarkable; but there is usually very little general perturbation in this form of myelitis in the adult.

The paralysis of the legs in this and similar cases appears, to the patient, of paramount importance; but the paralysis of the bladder and the altered state of the urine are of far greater moment. The condition of the legs in no way imperils life; the condition of the bladder and urine does. There is the risk of bedsore and its attendant complications from contamination with involuntary discharges—a danger which good nursing may avert till, as in this case, there is extreme emaciation with permanent rigidity of the limbs. And there is the greater peril, and one less easily averted, arising from the modification of the urine. The ammoniacal urine leads to cystitis, blood-poisoning, hectic, exhaustion, and death sooner or later. In our patient there was the more uncommon symptom of hæmaturia. The change in the urine is frequently, no doubt, dependent on the motor paralysis of the bladder, the urine becoming decomposed in consequence of retention; but when the bladder symptoms appear very early and are as marked as in this case, it seems likely that the nervous system has some direct influence in their causation—that they are produced, as Charcot thinks is probable, by irritation of a particular part of the grey matter of the cord.

It seems to me likely that the change in the mucous membrane of the bladder may have closely resembled that which is seen in the skin in acute bedsore and in similar affections. You, the other day, may have witnessed a striking example of acute bedsore in the girl J. A——. A few hours before her death large hæmorrhagic patches suddenly appeared on her buttocks; they extended between the labia and genital folds, where pressure could certainly not have had the slightest influence in their production, great blebs followed, filled with bloody serum. In a woman, also recently under observation, suffering from secondary acute softening of the cord similar ecchymoses and blebs appeared on the leg and foot, between the toes, and under the thickened cuticle of the sole. Moreover ecchymoses are not at all unfrequently found on the mucous membranes in acute cerebral and spinal disease. I have several times seen ecchymotic spots in the mucous membranes of the bladder in such cases. Extensive hæmorrhage into the mucous membrane of the bladder would be associated with inflammatory disturbance—cystitis,—and this with alkaline urine would be likely to lead to ulceration. The blood which might at first be poured out without decided breach of surface would become more abundant as the ulcerative process extended.

Acute bedsore usually accompanies cases in which, like this, the bladder troubles are marked; this evil, however, our patient escaped. He had bedsores after some weeks, but they were of the kind that is caused by pressure, emaciation, and the irritation of discharges. The high temperature in the perineum pointed to vaso-motor paralysis; and it seemed likely that the vessels of the bladder and rectum were dilated, and that this condition of the vessels contributed to the production of the hæmorrhage.

The hæmaturia cannot in any way, I believe, be ascribed to the use of the catheter; for the hæmorrhage was preceded by a rigor, vomiting, &c; the urine removed some hours before these symptoms was clear; the hæmorrhage was at first slight, the urine being simply sooty, as it is in renal hæmorrhage, and after a while more severe, the urine looking like blood and containing coagula; bloody fluid also escaped from the rectum. No difficulty was experienced in passing the catheter, and no force was used.

Most of the troubles of our patient were due to the bladder complications, but the degenerative changes which started from the primary lesion of the cord were attended with results which swelled the sum of his miseries. The descending degeneration of the lateral columns led to the permanent rigidity and flexion of the legs, the ascending changes possibly to the hyperæsthesia of the arms and trunk.

It is pleasant to turn from this terrible case to that of our other patient, W. K——. In this man the paralytic symptoms were preceded by and for some time accompanied with violent constitutional disturbance, high fever, pain, vomiting, prostration. Not only was there paralysis of the legs, but of the arms also, and in them sensation and motion were completely lost. But the muscles of respiration were not affected—he could swallow; and there was no paralysis of the bladder or rectum, no tendency to bedsore. When he came under our notice, six months after the onset of the affection, there was very general paralysis, flaccidity and loss of electro-contractility of the limbs, atrophy of masses of muscle, without implication of the bladder or rectum. These, the main features of the case, distinguished it from cases which, like our first one or that of J. A——, are examples of acute transverse myelitis, and from other forms of acute diffuse inflammation of the cord. Death is the general termination of these, and is usually caused by interference with certain organic functions; from paralysis of the muscles of respiration when the disease is in the upper part of the cord, as in the case of J. A——, or from paralysis of the muscles of the bladder or other vesical disturbance, when it is in the lower, as in the case of J. H——. The presence of organic derangement, bladder troubles, in the case of James H——, caused me to despair of his recovery, while the absence of all such disturbance in the case of W. K—— led me to expect improvement. In every instance, then, of disease of the spinal cord, it is essential that you carefully note the condition of the lungs and bladder.

The affection of the cord characterised by the group of symptoms I have described—namely, high initial fever, paralysis of one or more limbs, atrophy of whole masses of muscle, absence of paralysis of muscles of respiration or of the bladder or rectum, absence of tendency to bedsore and disposition to recovery—has been termed by Charcot, adult spinal paralysis, and is considered by him to be in all essential particulars similar to infantile paralysis. He is of opinion that the symptoms in these diseases depend on an inflammation of the motor area—anterior cornua of the grey matter of the cord,—an inflammation which commences in the large nerve-cells, and which may affect the neuroglia to a greater or less extent, be more or less acute, and lead to little or much destructive change.

In one particular our case is unlike one of adult spinal paralysis. In this disease, and therefore in infantile paralysis sensation is not usually impaired, whereas W. K—— suffered from anæsthesia of the arms and legs for two months. Not-

withstanding this, I think I am correct in regarding the case as an example of adult spinal paralysis. I think the irregularity of the symptoms was due to the severity of the case, to the unusual diffusion of the inflammation in the grey matter; it evidently extended up and down the cord affecting the arms and legs alike, and it seems also to have exceeded the ordinary limits transversely.

Sometimes in infantile paralysis and in adult spinal paralysis sensation does suffer to a certain extent, and there is pain. In these cases it would appear likely that the inflammatory disturbance had extended towards and irritated the central grey matter. In our case the inflammation became more diffused, and in consequence there was more decided derangement of sensation. As the inflammation receded towards the anterior cornua sensation was restored, and this was the first step towards recovery; improvement in motion followed, the muscles of the limbs regaining strength in the order they do in hemiplegia, the grosser muscles in the upper parts of the limbs recovering first. The improvement ceased short of complete recovery, as it often does in infantile paralysis, leaving the muscles of the leg and foot paralysed, atrophied, and insensible to galvanic stimulus; so that, though our patient is able to walk, he does so in the awkward manner described.

I find it impossible to offer any satisfactory explanation of the diversity of the affections of the cord in the two cases, nor can I point definitely to their cause. The men were healthy, exceptionally strong, and actively engaged up to the onset of their illness. We may suppose that an unconscious strain, with slight injury to the spinal cord, was the origin of the myelitis in the one case, and over-exertion in a man with a rheumatic diathesis in the other, but that is all. A difference in the extent of the inflammation may account for the absence of constitutional disturbance in the one case, its presence in the other; but a difference in intensity scarcely satisfactorily explains the diverse terminations of the inflammation—in the one case in destruction, in the other in almost complete resolution.

With respect to treatment. In the case of J. H——, the interruption of the cord appeared to be complete, and there was no indication of the extension of the inflammation, and no increase of the paralysis. I therefore did not resort to counter-irritation, as I should have done had I seen the case earlier, or had there been signs of increasing destruction of the cord. It is necessary for you to be careful as to the kind of counter-irritation you employ in cases of acute myelitis. I have seen a mustard poultice applied to the back lead to a sloughy sore, and greatly aggravate the patient's symptoms. I think that in all instances where counter-irritation is required a stroke or two of the actual cautery, as recommended by Brown-Séquard, is the most efficacious and least prejudicial form of applying it. The narrow scars left by the cautery do not lead to the widespread sore a poultice or blister may do, and its effects are instantaneous and positive. Its operation in the case of the girl J. A—— was decidedly beneficial. A few hours after admission she was in imminent danger of suffocation from increase of respiratory trouble. The cautery was applied to the upper dorsal region with immediate, but unfortunately only temporary, benefit. The administration of large doses of iodide of potassium and ergot would seem to be indicated, and these were given. The urine was drawn off regularly to prevent accumulation and decomposition, and the bladder was washed out with various styptics when the hæmorrhage occurred, and great care was taken, by scrupulous cleanliness and the relief of pressure, to retard the development of bedsore. In the case of W. K—— our treatment was directed at first to soothe pain, and afterwards to stimulate the weakened and paralysed muscles. No very active measures were resorted to, as the case seemed to me to be one tending towards recovery.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The thirty-fifth annual meeting of the above society was held on the 19th inst., when the following gentlemen were elected as office-bearers for the ensuing session:—President: Peter Stewart, M.D. Vice-President: John Niven, L.F.P.S. Treasurer: Ed. McMillan, L.R.C.S.E. Secretary: Andrew J. Hall, M.D. Editorial Secretary: Alex. Napier, M.D. Seal Keeper: Wm. Carr, M.B. Court Medical: T. F. Gilmour, L.R.C.P., Convener; Eben Duncan, M.D.; James Morton, M.D.; A. L. Kelly, M.D.; James Whittaker, M.D.

THE TREATMENT OF SCROFULOUS GLANDS BY THE ELECTROLYTIC CAUSTIC.

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SINCE the appearance in THE LANCET for April 21st of last year of my communication upon the treatment of scrofulous glands by the electrolytic caustic, a more extended experience has not only confirmed me in my belief of its utility, but has further enabled me to simplify the process in a considerable degree, so that the use of a blister is now avoided, and the treatment is rendered as unobjectionable as any escharotic can well be.

A reference to the previous paper will show that in order to obtain the electric current, and, simultaneously, the formation of chloride of zinc, the epidermis had to be removed from the surface upon which the silver plate was applied, both to get rid of the insulating properties of the epidermal tissue, and at the same time to obtain serum, upon the presence of the moisture and alkaline chlorides of which the whole action of the caustic depends. I had frequently tried to obtain the necessary electro-chemical changes by simply keeping moist the skin beneath the silver foil, but as uniformly I had failed until it was pointed out to me by a professional friend, with whom I had been treating a case by the caustic, that sufficient intensity of current might be obtained to pass through the epidermis if a plate of silver of considerably larger area than that employed on the blistered surface were made use of. He had himself tried it with success, and, following his suggestion, I now never find it necessary to blister.

The only change requisite in the construction of the instrument figured on p. 564 of the above-named number of THE LANCET, is in the size of the silver or negative plate; it now must be a disc or plate from two to three inches across at least, to the upper surface of which, as before, one end of the copper wire, or positive electrode, must be soldered.

The situations previously pointed out as best for the blister are not suitable for so large a piece of silver, and therefore either the nape or side of the neck or the sternal region will be found most convenient. The last situation has the advantage of keeping part of the apparatus out of sight, and of affording a firmer basis of support for the silver than the movable skin of the neck. The wire is then brought up beneath the patient's collar to one or more zinc points, according to the requirements of the case; or if some other part of the body than the neck be the seat of disease, the nearest available point to it must be chosen for the silver.

Wherever the silver is placed, the skin must first be well bathed in warm water, and then a piece of lint, twice or thrice folded, the size of the silver, and soaked in strong salt-and-water, must be laid upon the surface, and over it the piece of metal be strapped. Then follows an ordinary (salt-and-) water dressing, with gutta-percha or oil-skin, and over all some cotton-wool and a bandage, between the turns of which the wire will be left protruding. If the oil-skin be well strapped down on all sides, the lint beneath the silver will probably remain moist for twelve hours; but if not, the corner of the dressing must be raised, and a little more salt-and-water be squeezed in from a sponge; at least night and morning this must be done.

Another and perhaps more expeditious mode is to fasten down the silver and water-dressing with a square of Leslie's waterproof strapping, a slit being made in the centre for the electrode to pass through, while over this comes the cotton-wool and bandage. Whichever way is employed, it is essential to success that the silver and lint should, by bandage and strapping, be kept firmly applied to the skin, and that the dressings should be never allowed to become dry. The dressing under the silver can be remoistened without in any way interfering with the zinc points, which should remain untouched, unless for some special reason, for from three to five days. The more flexible the connecting

wire[1] between the two metals, the less likelihood there is of the zinc being disturbed whenever the silver is moved.

The chemistry of the process is the same as when a raw (blistered) surface is employed. The communication between the serum of the tissues and the silver, instead of being made directly through the serum of the blister, is now brought about through the intervention of the lint moistened with salt and water. The intensity of the electric current developed by so large a piece of silver not only overcomes the resistance of the epidermis, but seems to act even more efficiently in producing the chloride of zinc than when the smaller piece of silver and a blister are made use of. Where an ulcer can be found in a convenient situation, it is well to employ it for the silver plate, with or without the wet lint, for it remains moist by its own serous discharge, and benefits at the same time by the healing action of the negative or silver plate. There is always a stimulating action induced by the positive electrode or negative plate of the battery when applied over granulations. (*Vide* Guy's Hospital Reports, 1876.)

The following are short notes, from the reports of Mr. Maylard, of two of the most recent cases treated by the electrolytic caustic in Guy's Hospital.

CASE 1.—E. J——, nineteen, a domestic servant in the country, admitted into Martha ward under Mr. Golding-Bird, July 23rd, 1877. Three months ago she suffered from pain and swelling, without apparent cause, in the right submaxillary region. Poultices were applied, but the swelling only increased in size. Now, the patient has a swelling in the above situation about the size of a hen's egg; it is very hard, but not red at all. The first lower molar is decayed on the same side. Ordered a mixture containing iodine, and to have tooth extracted.

During August the electrolytic caustic was twice applied, after blistering (in the old method) behind the ear. The zinc was thrust into a small opening in the skin made to evacuate some pus that had formed. On each occasion only a little slough came away, but much purulent discharge. By the end of the month the superficial part of the swelling had broken down, but the rest remained as at first.

Aug. 31st.—Mr. Golding-Bird applied the electrolytic caustic, using a much larger silver plate—i. e., about two inches and three-quarters square—with lint saturated in brine, to the nape of the neck, instead of the blister behind the ear. The zinc point was bifid, and was inserted into the small opening through which the pus had been discharged on a previous occasion.

Sept. 11th.—The apparatus was worn four days; then poultices were ordered. Elimination of two or three glands this morning.

12th.—More slough came away, with pus. Mr. Golding-Bird removed a gland with forceps. To poultice.

On the 13th pus was being discharged, but no more slough formed. The swelling was smaller, and the skin around the puncture red and hard. This continued till Sept. 20th, when the apparatus was again applied.

22nd.—Patient's face much swollen; she was in pain all last night, and is feverish. Ordered a purge with calomel. To discontinue caustic; to poultice.

26th.—Patient much better and about the ward again (having kept her bed for one day). A large gland thrown off in the poultice, making the fifth since Sept. 1st.

27th.—Slight discharge. Surrounding swelling nearly subsided.

29th.—Discharged from hospital with the puncture quite healed, and all swelling disappeared. No more glands could be felt.

Remarks.—Except where mentioned the patient complained of no pain. On a few occasions I have seen the caustic produce suppuration, and then the pain accompanying the formation of an abscess has to be endured. On Nov. 3rd, Mr. Tipple, of Greenhithe, under whose care the patient had been, wrote that the puncture was still discharging a little; but that she had resumed her employment.

CASE 2.—E. S——, aged eighteen, readmitted into the Martha ward under Mr. Golding-Bird, Sept. 27th, 1877. This was an old case of congenital syphilis with suppurating cervical glands, and had been under the caustic treatment before. The whole neck, from one ear to the other, is studded with cicatrices, and at the posterior margin of each sterno-mastoid is a glandular mass the size of a horse-chesnut, that on the right side protruding as a granulating mass through a large opening in the skin.

Oct. 5th.—The electrolytic caustic was applied to the semi-protruding gland on the right side, the silver plate (2¾ in. by 1¾ in.) being strapped upon some lint, wet with brine, upon the patient's cheek.

9th.—Apparatus removed. The silver plate has been twice daily moistened with brine. To poultice.

11th.—Mr. Golding-Bird removed a large slough with forceps.

12th.—Caustic reapplied. The silver was fastened over the sternum on wet lint.

15th.—Apparatus removed. To poultice.

17th.—Two small sloughs came away. To continue poultices.

19th.—Caustic now applied to the swelling behind the left sterno-mastoid, through a puncture made in the skin over it. The silver was fastened over the sore, through which the mass on the right side had protruded.

23rd.—Apparatus removed. The sore under the silver presented a very healthy granulating appearance. To poultice.

26th.—A large gland came away from the left side this morning.

31st.—The sore on the right side over which the silver was placed was healed. A puncture was made through the skin into another small gland on the right side, below the former one, and the zinc point inserted. The silver was strapped over a sore on the opposite side of the neck.

On Nov. 3rd the apparatus was removed; on the 5th the gland came away, and poulticing was repeated; and on the 9th the patient was discharged, quite cured of her present trouble. Three days later the sore resulting from the last use of the zinc had nearly healed, and no more enlarged glands were to be felt, though the soft parts all about the neck were much stiffened by cicatrices.

Once this patient complained of pain for some hours, without any apparent cause; but on which occasion of applying the caustic the report does not state.

This mode of employing chloride of zinc is capable of a wider application than is here indicated. With slight modifications it can be used for keeping in check the growth of malignant disease in parts where other operative means are inadmissible or unadvisable, as the rectum or cervix uteri. I have known of its employment in a case of the latter disease, a rapid destruction of the growth and relief from pain being the result. A short rod of zinc was worn in the canal of the diseased cervix, and to it was attached a stiff copper wire, insulated with gutta percha, which terminated in a silver plate that was strapped to the front of the abdomen.

[1] The apparatus is manufactured by Krohne, 8, Duke-street, W.

NOISES IN THE HEAD; THEIR ETIOLOGY, DIAGNOSIS, AND TREATMENT.

BY EDWARD WOAKES, M.D. LOND.

(Concluded from p. 114.)

TREATMENT: THE PNEUMATIC TRACTOR.

WHEN considering the etiology of noises in the head, certain varieties of these were seen to be associated with retraction of the membrane of the drum. This condition of itself implies a serious interference with the acoustic properties of the ear, but it further serves as the outward sign and manifestation of other for the most part invisible departures from a healthy state of the auditory apparatus, to which the symptoms are due.

Retraction of the membrana tympani is met with in every variety of degree, from a slight cupping of its disc to complete collapse, in which its lower segment rests upon the promontory on the inner wall of the tympanic cavity. In this latter situation it may contract adhesions which bind it down in its abnormal situation. Further, the displacement of the membrane may be associated with other morbid states, such as alteration of its tissues, which may be either in the direction of thickening; congestion, usually most marked in the semilunar folds and handle of the malleus; thinning of its layers, which become harsh and dry;

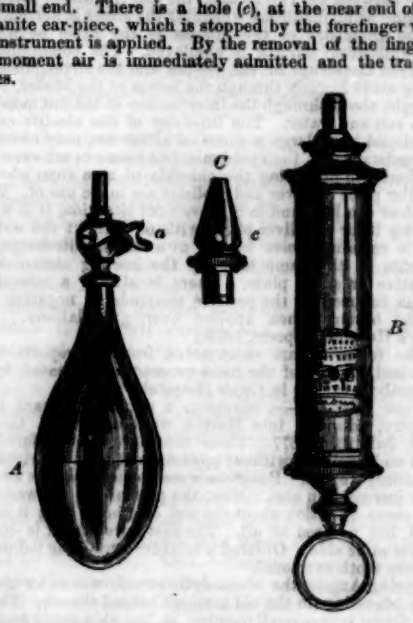
cicatricial bands and adhesions; perforations; or that special condition of the membrane may exist which has been described as pathognomonic of contraction of the tensor tympani muscle. Each of these conditions requires to be differentially diagnosed and appropriately treated, as its removal should be attempted before efforts are made to reinstate the membrane in its normal plane.

By far the largest number of cases of this kind are due to obstructions of the Eustachian tubes, acknowledging a catarrhal origin, and interfering with the renewal of air to the tympanic cavity. In recent instances the cupping is comparatively slight, and easily overcome by treatment directed to the post-nasal space, especially the sniffing up of alkaline solutions, and the more direct application of such fluids by means of the post-nasal syringe. Bicarbonate of soda, half an ounce to a pint, of water is the most generally serviceable, to be later on supplemented by chlorate of potash or muriate of ammonia in like proportions. Common salt and water will occasionally suffice for the purpose. After this treatment has been carried out for a short time inflation of the ear by Pollitzer's process on two or three successive days will suffice to replace the membrane in its normal site, where it will remain if the mischief have not advanced into the middle chamber of the ear. It is true that this is the very alphabet of aural practice, but it forms an important stage in the treatment of all these cases, in the more complicated equally with the simple ones. It is insisted upon here in order to guard against the premature recourse to the Eustachian catheter, which, if used before the catarrhal condition of the parts is subdued, can only do harm; it is, moreover, unnecessary, and a fruitful source of failure to relieve the symptoms.

Far more difficult to deal with are those forms of depressed membrane associated with complete stenosis of the Eustachian tube, or which are further complicated with contraction of the tensor muscle, or are due to cicatricial bands and adhesions. In extreme cases of this latter kind the tympanic cavity may be all but obliterated, the long process of the incus behind the manubrium and the promontory below it being visible through the dry and atrophied membrane. The external auditory canal will then present a funnel-shaped ending, lined with the more or less glistening membrane. In a patient, now under my care, in whom ear-trouble has existed since girlhood, the left Eustachian tube is at present completely occluded, while the membrane of the same side has gradually retreated till it forms a narrow cul de sac in a direction forwards and upwards towards the orifice of communication of the Eustachian tube with the middle ear. In such cases the first step in the treatment is to reduce the stenosis of the tube, and secure as healthy a state of the tissues generally as circumstances will permit. The ordinary text-books on aural practice supply the details whereby to accomplish these objects. I propose, therefore, in this paper to call attention to a method of treating the collapsed membrane, supposing this preliminary treatment to have been carried out, with the view of restoring the normal tension on the labyrinth. By this means the perception of sound waves will be improved, and the attendant symptoms of tinnitus and vertigo in proportion diminished.

Finding suction by Siegel's exhausting speculum to be of little service, I have designed an instrument for use in these extreme cases which, at any rate, has the merit of being able to accomplish the object in view—viz., that of drawing out the membrane from its collapsed position, and of detaching it from any adhesions it may have therein acquired. The principle upon which the pneumatic tractor depends for its superiority over that of Siegel is, that the entire force which the exhausted receiver is capable of exerting upon the point on which it acts can be brought into operation at once, suddenly, and, as it were, by a stroke or coup. At the same time, the operator has it in his power to apply the traction as gradually as he may desire. The amount of force used is also under his control, depending upon the extent to which the exhaustion of air from the apparatus is carried out previously to applying it. The decision of this point is a question of some delicacy, requiring experience in the management of the instrument.

The *pneumatic tractor* consists of three parts. A pear-shaped bell, *A* (*vide* diagram), to which the exhausting syringe, *B*, fits. The bell is furnished with a stopcock, worked by a lever-handle (*a*). *C* is a vulcanite ear-piece, shaped so as to fit the meatus air-tight, which it is enabled to do by means of a short length of rubber tubing fitted to the small end. There is a hole (*c*), at the near end of the vulcanite ear-piece, which is stopped by the forefinger when the instrument is applied. By the removal of the finger at any moment air is immediately admitted and the traction ceases.



To prepare for use:—Fit the exhausting syringe into the bell, and open the cock; two or three strokes of the piston will exhaust it sufficiently. Then close the stopcock, and detach the syringe; in its place put on the ear-piece with the air-hole upwards.

To use the instrument, thus prepared, take the bell in the right hand, and introduce the ear-piece covered with the tubing into the meatus, and press gently but firmly into the canal, a proceeding which will be facilitated by drawing the auricle upwards and outwards. Then close the hole (*c*) with the forefinger of the left hand, and with left thumb open the stopcock by pressing sharply on the lever. The effect will be evidenced to the operator by a sensation of dragging on the skin of the finger closing the orifice, at the same time the patient experiences a similar sensation in the drum-head, which is usually quite free from pain. The traction need not be kept up longer than from eight to ten seconds, and is terminated by removing the finger, when the air enters with an audible rush.

After a successful application of the pneumatic tractor in an ordinary degree of depression, the membrana tympani will be seen on examination to have regained its normal plane. At the same time the effect of the suction upon it will be evidenced by a slight degree of injection of its blood-vessels, such as commonly attends an ordinary syringing, and subsides as speedily. When the instrument is used for the purpose of detaching adhesions, it is necessary to exhaust the bell more completely of air, so that the suction may be greater. In such cases, indeed in all, when it is possible to do so, some patency of the Eustachian tube should be secured, as the forward pressure of the column of air behind the membrane, when this is exposed to the suction of the vacuum, is an essential element in the success of the operation. Pressing equally in all directions, this column of air lifts the membrane from its adherent point as though it were pushed from behind by an air-cushion. When, as occasionally happens, the adhesion is so firm that the membrane is torn in the act of separation, the rupture takes the form of a slit-like rent, as though cut with a knife. The sharply-defined character of the rent is mainly contributed by the pressure of the column of air behind the membrane derived from the shaft communicating with the post-nasal space. The existence of this perforation of the membrane is in every way an advantage, as it allows the better medication of the tympanic cavity. It may, morever, be kept open for weeks by the occasional reapplication of the pneumatic suction to just such an extent as causes the edges of the rent to gape. By carefully following out this treatment I have

in two instances succeeded in establishing a permanent opening, and with it a corresponding improvement of hearing power, while the noises and giddiness are proportionately diminished in nearly every instance where its employment is indicated.

The precautions necessary to be observed in using the pneumatic tractor have already been pointed out. Briefly summarised they are as follows. It is of primary importance to establish a correct diagnosis, both as to the cause and extent of the existing depression, as the conclusions so arrived at indicate the degree of force necessary to restore it, and resultantly the extent to which the exhaustion of the bell is to be carried. Secondly, the patency of the Eustachian tube should be secured as a preliminary procedure. If the membrane be harsh and dry, and there are indications of adhesions, these must be softened by the external and internal use of alkaline fluids. Further, after this preliminary treatment has been carried out, it is necessary to proceed with caution. At the first a very slight degree of exhaustion, such as is implied by one stroke of the piston, should be employed, and, after each application, the membrane should be carefully examined to judge of its effect. After this tentative proceeding, the degree of exhaustion may be gradually increased, according to the judgment of the operator. The necessity for observing these precautions will sufficiently indicate the undesirability of entrusting this instrument to inexperienced hands, otherwise discredit will be thrown upon a really useful auxiliary to the armamentarium of the aurist.

The pneumatic tractor is made by Mayer and Meltzer, of Great Portland-street, according to my instructions, and is shown by them at the Paris International Exhibition. A brief notice of it occurs in the report of British instruments in THE LANCET for July 27th, p. 137.

Harley-street.

"SUMMER" DIARRHŒA: ITS NATURE, CAUSE, AND TREATMENT.

BY WILLIAM JOHNSTON, M.D.,
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(Concluded from p. 398.)

ALLEGED CAUSES OF THE DISEASE.

MUCH speculation at present exists with regard to the causes of this annually recurring and universally distributed epidemic. Many theories have been advanced, some of which have been ably advocated by officers of health throughout the country. In my report to the Sanitary Committee on the mortality in the borough from the zymotic diseases during 1877, I gave it as my opinion that "summer" diarrhœa depends upon the pollution of the air by the escape of sewer gas from badly-constructed and ill-ventilated sewers. My observations during the last eighteen months upon sewer air, and the microscopic organisms suspended in it, have convinced me that sewer air is the chief cause in the production of the disease, as no other condition, in my opinion, satisfactorily accounts for our high urban diarrhœa death-rates. I may be pardoned if I now venture to discuss the various theories at present advanced with the view to explain the cause of the disease.

1. *Artificial feeding.*—This pernicious custom, it will be admitted by all, is unfortunately but too prevalent amongst the mothers of the present day. The very exigencies of life seem to favour its increase amongst the poorer classes of the population; but although I am fully alive to the degeneracy of constitution that results from artificial feeding, and to the mortality that annually arises from the diseases induced by it, still I cannot accept it as the active cause of the *sudden* mortality amongst our infantile population during the summer months. I am led to form this conclusion from a consideration of the following indisputable facts. If artificial feeding be the chief cause in the production of the disease, we should naturally expect to find the greatest inflictions from it experienced in those towns where out-door female labour is most in demand. Do we find it so? Anyone acquainted with the industries of Oldham and Bradford will admit that there the employment of female labour is far in advance of most other manufacturing towns, and from my own personal knowledge of both of these places, I can safely say that the number of females they employ bears far greater proportion to the population than applies to Leicester, and yet we find that Oldham has escaped the ravages of the present epidemic more than any of the other twenty large towns, and also that Bradford, with 60,000 more inhabitants, has experienced only about 40 per cent. the mortality of Leicester. Artificial feeding is carried on to an enormous extent in both Oldham and Bradford, and if this formed the chief cause in exciting the disease, the death-rate experienced would be very different from that recorded. Again, Bristol and Hull are both seaport towns, and the employment of female labour is much about the same in both places; yet we find, from the Weekly Return of the Registrar-General (Aug. 17st) that during the past eight weeks the annual death-rate from diarrhœa in Bristol was equal to 2·3 per 1000, and during the same period the rate in Hull was no less than 11·1 per 1000.

In the seventeen infantile cases that came under my own observation during the last two months, and none of whom had been artificially fed, the disease was acquired in a grave form, and in three instances ended fatally. With these striking evidences before me I cannot admit that the chief cause of the disease lies in the artificial feeding, *per se*, of the young. Artificial feeding, however, *in districts where insanitary conditions exist*, exerts a most powerful influence in the spread of the disease by acting as a vehicle for certain atmospheric germs, the introduction of which into the system, as I shall endeavour to show further on, gives rise to the disease.

2. *Maternal neglect, want of cleanliness, and ventilation.*—That the disease may be acquired under conditions where social sanitary measures are strictly carried out in the management of children was evidenced by what occurred in a crèche that has recently been established in this town. The average number of children, for the most part infants, in this crèche during the month of July was about twenty; and although every care was bestowed by trained nurses upon these infants with regard to the preparation of their food, cleanliness, &c., they nearly all acquired the disease. I may mention also that the rooms of our crèche are spacious and lofty, and the building is thoroughly ventilated. Again, in October of 1877 I made a house-to-house visitation of all houses in which deaths had occurred from diarrhœa during the previous quarter. The infantile deaths amounted to 162. I found the sanitary condition of the premises where these deaths occurred to be—(1) *As to yard:* 132, or 85·7 per cent., were in good condition, having open and well-scavenged yards attached; 19, or 12·3 per cent., had rather confined yards; 3, or 1·9 per cent., had no yard. (2) *As to water-supply:* 117 houses were supplied with waterworks water, = 75·9 per cent.; and 37 were supplied with pump water, = 24 per cent. (3) *As to closet accommodation:* 95 houses had pails, = 61·6 per cent.; 47 had waterclosets, = 30·5 per cent.; 12 had privies, = 7·8 per cent. These figures speak for themselves, and clearly indicate that the disease, as far as Leicester is concerned, prevails in houses where good sanitary conditions exist as regards yard ventilation, good water-supply, and closet accommodation; and in the current epidemic the close courts in the town have enjoyed, up to the present time, a remarkable immunity from the disease, both as regards the numbers affected and the fatality recorded.

3. *Ripe fruit.*—The consumption of fruit is much about the same in all manufacturing towns, and therefore fails to afford a solution of the wide variations in the prevalence of the complaint observed in different places. I shall, however, endeavour to prove that the eating of over-ripe fruit assists in the spread of the disease in the same way as artificial feeding—i.e., the fruit forms a succulent and effective vehicle for germs when present. I have induced the disease in my own person on two occasions by the partaking of over-ripe plums. The minute organisms present in these plums, and which unquestionably gave rise to the disease, I shall describe later on.

Meteorological conditions.—Before entering upon this subject, I may state that I consider atmospheric conditions act only as *excitants* of the disease, and this only applies to localities where other conditions are met with that act powerfully as *predisposing* causes, for I feel assured that if we could discover any particular town or district whose

sanitary machinery was in perfect working order the vicissitudes of climate would there be found to be perfectly harmless in the production of the disease.

I have arrived at the following conclusions with respect to the weather conditions that seem to influence diarrhœa mortality, after a careful tabulation of the meteorological conditions and diarrhœa mortality experienced during the summer months of each year since 1866. The prevalence of the disease appears to be governed by three weather conditions — viz., temperature, atmospheric humidity, and rainfall, and these follow in the order of their importance. The combination of these that seems most potent for evil is high degrees of heat, great atmospheric dryness, with little or no rainfall. This combination was experienced throughout July of 1868, and the diarrhœa mortality was greater than has ever since been recorded. Very high temperatures prevailed during the months of May and June of the same year. The combination most unfavourable for the disease seems to be prevailing low mean temperatures ranging from 57° F. to 58·5°, in conjunction with high degrees of atmospheric saturation, and more or less continuous rainfall. The least mortality (86 cases) was experienced in Leicester during a prevalence of these conditions in the summer quarter of 1866.

From the charts of the previous twelve years I think this general law may be gathered: that a continuance for a week or ten days of a mean daily temperature of 59° or over, in conjunction with a scarcity of rainfall and low degrees of humidity, and occurring during any period from the twenty-fifth to the thirty-seventh week, is sufficient either to provoke the disease or increase its prevalence. A hot June month invariably hastens its appearance.

Subsoil temperature. — Before entering upon the mode of causation of the disease it is essential that I should briefly draw attention to the change of temperature invariably induced in the subsoil by the meteorological conditions experienced during the spring and summer quarters of the year. The sun is the principal source which imparts to the subsoil of our towns the heat which it possesses. From the vernal equinox, March 21st, until about June 22nd, the days gradually increase in length, and the heat which the soil receives from solar radiation during the days is, speaking generally, greater than it parts with during the nights. The immediate result is a gradual rise during the spring quarter in the temperature of the subsoil and the sewers embedded therein. The temperature in sewers, when these are not sufficiently ventilated, and under ordinary conditions of weather, will be found to have risen from 52° or 54° Fahr. in March to 59° or 62° by the end of June; and if hot, dry weather has prevailed during this latter month, much higher sewer temperatures may be registered at its close. A decided cooling of the sewers and subsoil of towns, as indicated by temperatures below 56°, will not be observed to take place, under ordinary conditions, until about Sept. 25th—i. e., until the period just before the daily receipts of heat from solar radiation begin to fall short of the nightly expenditures. The highest sewer temperature I have ever observed was 69·5° Fahr.; this was taken on the 19th July of the present year, when the outer-air temperature was 83·5°.

Now, when temperatures of 56° F. and over are once established in sewers, putrid fermentation sets in, and the process goes on with a rapidity that is directly proportionate to the increase of temperature attained in the sewer. Sewers in this heated state afford the very conditions (heat, air, and moisture) for the rapid putrefaction of all the putrescible liquids and animal excreta that may be retained in them, for the air of a sewer, if not sufficiently ventilated, is always at the point of *complete saturation*.

ORIGIN OF THE DISEASE.

My observations, during the last eighteen months, upon the microscopic organisms contained in ordinary air and that of sewers, are much too numerous to mention in this already too lengthy paper; I will, therefore, only draw attention briefly to what I have observed, and the conclusions I have drawn therefrom.

(1) During the summer months, the liquid portion of sewage derived from sewers of deposit will be found, upon microscopic examination, to contain great numbers of living forms, including (*a*) several genera of bacteria, such as micrococcus, bacterium termo (free and in the zoogloea form), bacillus, and vibrio; (*b*) rapidly-moving infusoria, flagellate and ciliated, belonging to several kinds of common protozoa, as monadina, euglenia, alyscum, trichodina, paramecium, kerona, &c.; and (*c*) microscopic hirudinea. The above living forms are always accompanied with variable quantities of the spores, spore-cases, and mycelium of fungi.

(2) The *moist air* in ill-ventilated and non-cleansing sewers, when the temperature of the latter is above 57° F., contains bacteria of the genera micrococcus and bacterium termo, the numbers present being in direct ratio to the increase of temperature from 57° to 69·5° (the highest temperature observed).

(3) The same organisms are to be found in the confined air of cesspools, and here their numbers increase with the atmospheric temperature.

(4) The trapping water of all gulley-grates and stench-traps, when connected with sewers of deposit, contains great numbers of both kinds of bacteria, derived in great measure from the air within.

(5) During hot weather, and especially when conjoined with great atmospheric dryness, these organisms are given off from all liquids containing them, and are carried into the air in very large numbers by the ascensional force of evaporation. This fact can be easily demonstrated by covering any vessel containing a solution abounding in bacteria with a glass plate. The under surface of the plate becomes coated with watery vapour, which can be collected into drops by the addition of ether, and on subsequent examination discloses the presence of bacteria. These bacteria, as has been before stated, are the active agents in causing putrefaction in putrescible liquids and substances of animal organic origin, and their appearance in the air of sewers and close cesspools is a sure indication that rapid putrefactive changes are going on in the excrementitious matters that may be retained in the former or collected in the latter.

(6) In badly-sewered districts, milk will be found to be speedily infected with the above ferments; their presence may also be frequently recognised in the stale food of infants, if due care be employed in their collection.

(7) The juices that exude from and adhere to the over-ripe fruit, exposed in shops or hawked about in such districts, will be found, with few exceptions, to contain numbers of bacteria (rods and spherules) moving about amongst the cells of saccharomyces exiguus (Rees), the ordinary variety of fruit ferment.

(8) The atmosphere of these districts during hot summer weather, when filtered, is always found to yield fungal elements, ranging in character from micrococcus to mycelial filaments. I have never detected the presence of bacteria in the air of the same localities during any day in April or May.

(9) For the last two years the commencement of "summer" diarrhœa in Leicester has been contemporaneous with the appearance, in large numbers, of bacteria in the air of some of its sewers.

The weather conditions of 1878 have been more favourable than last year for the development, multiplication, escape, and subsequent atmospheric diffusion of these sewer organisms, and these conditions have given rise to a greater prevalence of the disease and a higher fatality.

In a previous part of my paper it was shown that the above organisms are present in great numbers in the bowel discharges and vomited matters of patients affected with the complaint under consideration. I therefore consider that (*a*) diarrhœa, as it affects both adults and infants during the summer months, owes its origin, in the great majority of instances, to the introduction of minute living organisms (bacteria) into the system by means of air or in food; and (*b*) the disease depends upon putrefactive changes in the bowel contents, which changes are correlative to the development and multiplication of these microscopical organisms.

TREATMENT.

The strongest evidence in favour of the putrefactive nature of the disease is afforded by the treatment. I have obtained the best results by giving *antiseptics*, either alone or combined with mild astringents. The antiseptic preparations which seem to exert most power in arresting the sickness and diminishing the number of alvine discharges are—carbolic acid, quinine, salicylic acid, the mineral acids (especially the dilute sulphuric), thymol, benzoic acid, and borax. All these will be found beneficial in the treatment of the disease, and their power as remedies is here entirely due, in my opinion, to their antiseptic properties.

Leicester.

ON SYSTEMATIC EXERCISES; THEIR VALUE IN THE PREVENTION OF DISEASE.

BY EDWARD T. TIBBITS, M.D. LOND.,
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(Concluded from page 399.)

IT is generally supposed that the brain is the organ of the mind. But the mental operations carried on within the skull could not take place independently of the senses. Hence mind appears to involve not only the centres, but the peripheral portions of the nervous system. We might even say that it exists in the muscles, and to a certain extent in every organ of the body; that, in fact, it includes body—that the latter is a part of mind. In all probability, there are in each one of us certain innate physical, and therefore mental peculiarities, which may be truthfully expressed by the word "tendency." It is well known how these tendencies may be kept in check, altered in their course, or almost extinguished by judicious moral and religious education, and various external influences, social or otherwise. There is nothing irrational in supposing that these tendencies are dependent upon various physical conditions of nerve-cells and fibres, peculiar to feeling, thought, and volition; and that they are probably influenced to some extent by the state of muscles, glands, and viscera. In any case, it does not appear unphilosophical to make a division of cells, fibres, and other tissues concerned, into three groups, corresponding to the threefold constitution of the mind: (1) affective; (2) ideational; (3) volitional. From our knowledge of other parts of the body, we should expect, by a constant and judicious exercise of the parts involved in each group, increase of cells and fibres in number or size, or both; probably some alteration of chemical composition; and, lastly, more decided and efficient action. Feeling would be intensified, thought refined and elevated, and volition strengthened. Conversely, we should argue that, if the cells and fibres in any one group were allowed to remain in a state of inactivity or sluggish action unduly prolonged, it must be followed by obtuse feelings, intellectual degradation, and an enfeebled, vacillating will; and this appears to be strictly in accordance with our experience.

Use or exercise then begets growth, development, and power. Disuse, or the want of exercise, wasting, degeneration, weakness, and in many instances extinction. To quote a few examples:—

1. Regular physical exercise short of over-fatigue promotes growth, elasticity of muscular fibre, facility of movement, whilst an undue prolongation of inactivity ends in atrophy.

2. In double organs destruction or inefficiency of one throws more work on the other, and as a consequence enlargement ensues.

3. The loss of one sense increases the acuteness of the remaining ones, because they are exercised more frequently and with greater attention and accuracy; and, further, we know that each of the special senses may become educated and developed by exercise to an extent which is almost marvellous. Is there the same physical condition in the educated and uneducated sense? I think not.

4. The complicated movements of the acrobat are executed with the greatest difficulty at first, even when commenced, as they usually are, during childhood. By degrees, after tremendous repetition, they become more elegant and perfect, and at last almost automatic. And so with the accomplished pianist and violinist, who certainly can execute many airs with scarcely any mental effort. The first few notes serve to recall the association of sound, touch, and succession of movements, and the remainder of the piece is completed automatically.

5. Some authorities contend that memory implies growth of new cells and fibres, and possibly further development of old ones. At any rate memory is vastly improved by exercise, and almost lost if not properly cared for and used.

6. The same effect of exercise, or the want of it, is quite as apparent in the case of the emotions.

In every human being there is, hypothetically, at any rate, a certain quantity or charge of nervous energy, which must eventually be expended in some way or other. There are three directions in which it may travel: the affective, the ideational, and the volitional—all three; or it may chiefly and morbidly be expended in one direction only. Now it is possible to direct this nervous energy into one of these three channels, and in some measure to regulate its force. And not only so, but energy flowing in one direction—say the affective—may, especially in early life, during the period of growth and development, be checked to a considerable extent, and diverted into either the ideational or the volitional channel, one or both. The following may be quoted as a few arguments in favour of this view:—

(*a*) When a little child receives an injury, it is wonderful how a really sharp blow may be rendered comparatively imperceptible by directing its attention suddenly to a bright light or colour, a loud or musical sound, or something which acts for the time being with great intensity on some of the fibres engaged in one of the special senses.

(*b*) The powerful stimulation of one set of fibres acts occasionally in direct antagonism to that portion of the nervous system involved in some of the emotions. Mark the effect of music through the medium of the auditory nerve. Does it not calm the passionate, encourage the timid, and soothe the distressed? In these instances the combination of fibres &c. concerned in the emotions of anger, fear, and grief, become passive, as it were, before the intense stimulation of the nerve of hearing.

(*c*) Are not hiccough and sneezing readily checked by the sudden stimulation of some other portion of the nervous system?

(*d*) Pain—positive pain—vanishes in a remarkable manner when attention is riveted on something else. The disagreeable sensation of cold is sometimes scarcely perceived (as I have myself frequently experienced) when one of the special senses is powerfully stimulated, or the mind deeply engaged in thought.

(*e*) Dr. Broadbent, in his interesting lecture on the Construction of the Theory of the Nervous System, argues that the inordinate action of the lower limbs in locomotor ataxy is due to *concentration of energy* in the nerve nuclei of the lumbar enlargement. He considers that motor impulses passing down the antero-lateral columns are in the normal state distributed to many segments of the cord by the co-ordinating fibres in the white portion of the posterior columns; but, in consequence of disease of the latter, they cease to perform their functions, and the whole force of motor impulse is expended on the nerve nuclei in the lumbar region. The removal of energy by disease from certain portions of the nervous system increases the power of that remaining intact. Hence the activity of healthy nervous tissue appears in certain instances to be increased when some portions are rendered inactive by disease.

(*f*) Last year, amongst my out-patients at the Bradford Infirmary, I met with two epileptics who were sometimes enabled to ward off an approaching attack, in the one case by seizing the right wrist with the left hand and holding it down very firmly on the right thigh for a short time, in the other by starting up and running quickly 200 or 300 yards.

(*g*) It is said that an ague fit may be deferred by putting back the clock unknown to the patient.

It appears, then, that nervous energy may be transferred from one portion of the system to another, or it may be concentrated in a particular direction; and, further, that a morbid activity in one portion may be diminished by arousing the dormant energy in another. Therefore, I believe that systematic exercises which involve the volitional portion of the system may be expected to produce an increase of all parts which contribute to the origin, maintenance, and continuance of healthy volitional action; and, as a final result, bearing in mind the gradual building up of the will on the purposeless movements of the infant, we ought to have an increase in the power of the will. Is it possible that growth and development of muscle can have any conceivable connexion with a high moral tone? I believe it is, and for the following reasons:—

1. Emotion is usually accompanied by certain outward physical manifestations which are to some extent under the control of the will. Coexistent with the mental state certain glandular and other effects are produced. Now, by exercising an inhibitory power over the muscles it is possible to stifle, or at any rate reduce, the violence of the emotion. By systematic exercises the muscles develop,

become more powerful, act more readily, and thus lead to a more efficient control of the feelings. At the command of the will the muscles are kept at rest, glandular and other effects are less marked, and, finally, the emotion gradually dies away.

2. Mark the attitude of an individual who expresses a determination to carry out his plans. He clenches his fist, stamps his foot, and says with emphasis "I will" simultaneously, and his muscles generally are in a state of contraction. And is there not a muscular element in that unflinching resolution to bear severe pain without outward manifestation?

3. Muscular exercise produces power and a readiness to act in obedience to a wish which must of necessity engender confidence. This confidence in the ability to act is a mental process springing out of physical strength. What cannot be accomplished by careful preparation? Note the admirable swim of Webb and the prolonged walk of Weston, both feats of prodigious and unexampled endurance. In each case there was undoubtedly an intense feeling of fatigue, amounting to severe pain, and yet they were enabled by a powerful exercise of the will, greatly aided by, if not actually arising out of muscular development, to bring their labours to a wonderfully successful termination. May not any of the emotions be fitly compared with the state of fatigue? And is it not, moreover, true that they are all more or less under the control of the will?

4. But, further, systematic exercises assist in the control of the feelings and appetites—(*a*) *By exhaustion.* It is clear that by expending a certain amount of nervous energy in a definite direction, which must be given off in some way or other, the tendency to take any other direction is greatly diminished. (*b*) *By habit.* By degrees exercises become so much a part of the individual that they are performed as a matter of course. Early rising, for instance, is usually an act for many years of self-denial, but by frequent repetition the effort is reduced to a minimum. Is it not reasonable to suppose that an active vigorous condition of muscle is of material assistance not only in taking the final leap, but in forming the resolution to do so. After a time, indeed, may there not be a certain amount of automatic action about it?

5. Of course, it is not by any means a universal fact, but it is a matter of observation that the woman is more emotional than the man. Has muscular development any share in the production of this difference?

6. Almost every practitioner knows that an individual who has been suffering from acute disease has not that control of the feelings which is natural to him. Has the wasting of muscle anything to do with this?

Now, if excessive selfish indulgence has the morbific influence which I have ascribed to it, then it follows that an increased power of the will, and a more constant and regular exercise of it, must of necessity prevent much disease. It has been shown that some of the more important physical phenomena accompanying states of feeling are directly and powerfully, I do not say solely, influenced by the will; in other words, the muscular movements at any rate may be checked, or almost extinguished, by volitional control. This control is strengthened, facilitated, and made more efficient by systematic physical exercises. Following the same line of argument, I believe that mental exercises of a suitable kind are second only to physical exercises in importance. If this be so, there remains this question, which is one well worthy of the serious consideration, not only of each individual member of the medical profession, but of every reformer, statesman, and philanthropist. In what manner, when, and how long should these systematic exercises be employed? Without attempting to give even a sketch of a complete answer, I would merely venture to mention one or two points which have occurred to me:—

1. That systematic physical exercises should take a very prominent place in the training of our youth, irrespective of rank, in both sexes, and they should form a very much larger share of the instruction given in our board schools than they do at the present time.

2. That during the first ten years of life, systematic mental exercises over and above reading and writing should be of a moral nature. The beauties and advantages of truthfulness, temperance, and honesty should be impressed upon the youthful mind, and contrasted in their results with the hideousness and degradation of dishonesty, intemperance, and deceit. Without a shadow of a doubt, it is far more important during the first decade of human life to point out the difference between right and wrong, and see that there is a decided and proper appreciation of it, than to crowd the brain with facts and figures, or with anything else. It must not be forgotten that physical exercises lose much of their value apart from mental and moral ones, as far as control of the will is concerned, as may be witnessed over and over again in the persons of professional athletes, prize-fighters, and soldiers. The physique of a man may be ever so good, and he may have great volitional control, but it is of little use unless he knows when to exercise that control. As well might you expect a vessel classed A1, thoroughly well furnished with efficient machinery, able seamen, and judicious officers, but without helm, compass, or chart, to make a safe and rapid voyage to the antipodes.

3. That when children become capable of understanding them, a few simple facts relative to the laws of health should be presented to their minds. This would naturally include the results of non-observance of those laws, and thus the necessity of self-control would be forced upon their attention.

In conclusion, however unpalatable and nauseous the idea, disease appears to be in many instances an evil of our own creation; and I cannot help thinking that the allotted term of threescore years and ten might be much more frequently attained, without of necessity entailing a life of rigid asceticism, by a constant persevering habit of self-denial, steadily and firmly maintained by systematic exercises.

NOTES OF

TWO CASES OF STRANGULATED HERNIA, WITH UNUSUAL SEQUELÆ.

BY F. ROYSTON FAIRBANK, M.D., M.R.C.P.ED.,
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THE following cases illustrate two possible sequelæ of operation for strangulated hernia, which are, I believe, very rare. I have not been able to find any notice of them in the books I have consulted.

CASE 1. *Strangulated femoral hernia; operation; subsequent ascites from chronic peritonitis; paracentesis; recovery.* — Betsy M——, a married woman about forty-five years of age, came under my care with the following history. Had always been healthy and active until ten weeks ago, when she suffered from strangulated femoral hernia on the left side, the rupture being of quite recent origin. After the symptoms had existed two days she was seen by a surgeon, who at once operated. He informed me that he opened the sac and found a small knuckle of intestine, dark but otherwise sound. Pain continued in the lower part of the body for a few days, but it was relieved by fomentations, and entirely passed away.

The wound had not yet, after ten weeks, quite healed, and from it a clear fluid constantly oozed. From the date of operation the patient had noticed her body gradually enlarge, until it was at this time as large as at the ninth month of pregnancy. The enlargement was evidently caused by ascites. There was great oppression of the heart and lungs from the enlarged abdomen. She was ordered to take diuretics, and to remain under observation.

A week later, distension of abdomen causing great distress, I performed paracentesis, and drew off about two gallons and a half of fluid, of a deep straw colour, which became perfectly solid with heat, and was of a sp. gr. 1025. The distressing symptoms were at once relieved. The wound in the groin healed completely in twenty-four hours.

Three weeks after paracentesis her abdomen was again nearly as large as before, and she was greatly emaciated and anæmic. I prescribed tincture of the muriate of iron, with solution of acetate of ammonia. She rapidly regained her strength under this treatment, the ascites entirely disappeared, and her body was reduced to its previous ordinary dimensions. Two years later she remained in good health. I attribute the ascites to chronic peritonitis, the result of the operation.

CASE 2. *Old inguinal hernia; operation; return; rupture of the sac with escape of the intestine externally; operation; recovery.*—Sophia T——, aged forty-two years, a tramp, was admitted as "a casual" to the Doncaster work-

house, February 17th, 1875, and left the following morning. During the evening she returned to the house with the following statement. She had suffered from hernia on the right side for many years. About five years ago she was operated upon for strangulation. The hernia returned and formed a large tumour. During the night, while in the casual ward, she noticed that the tumour had given way, and that the gut was protruding. Feeling some sort of shame at her unfortunate condition, she said nothing to the officials, but took her departure, intending to make her way on her rounds. Finding herself unable to proceed, she returned to the workhouse, where she was at once placed in the hospital and seen by the medical officer, my late partner, Mr. L. Kiernan. He requested me to attend with him, and on examination we found a large right oblique inguinal hernia about the size of a child's head. The parietes were very thin, and composed in great part of the cicatrix formed after the operation, stretched out at one spot to the thinness of brown paper. Here a laceration had taken place, and a piece of intestine protruded at least eighteen inches long. The surface of the gut was quite dry, and of a deep red colour. She was in a state of extreme prostration. Having given her some brandy I enlarged the wound and replaced the gut in the sac, and brought the edges together with a silver wire. I ordered cold water dressing, and thirty minims of tincture of opium every three hours.

The next day she had greatly improved in condition, and already vermicular movement could be noticed in the bowel contained in the sac. The following day, the second after the accident, the bowels were moved naturally. The wound healed by first intention, and she made a rapid recovery without a bad symptom. She was provided with a bag truss, which was a great comfort to her, and left the house in a few weeks well able to proceed on her rounds.

Doncaster.

ABSCESS OF KIDNEY TREATED BY ASPIRATION.

By ARTHUR LUCAS, M.R.C.S.

On October 3rd, 1876, I was summoned to attend S. P——, a lady aged sixty-two years, who complained of nausea, vomiting, and loss of appetite, together with pain in the right side of her belly shooting through to the back. She stated that she had been suffering from these symptoms for some weeks, though to a less degree. She did not remember to have shivered at any time. Her pulse at this period was 100; temperature 101·4°; tongue red and glazed; bowels regular. Palpation failed to elicit any irregularity or swelling in abdomen owing to the extreme tension of its walls on even moderate pressure. The urine was scanty, cloudy when passed, and deposited an amber-coloured sediment which half filled the glass on standing. Its specific gravity was 1030, and it contained two-thirds albumen. Numerous pus-cells were seen on microscopical examination.

On October 5th she had a succession of rigors, with rise of temperature and pulse-rate, and at a spot situated midway between the right iliac crest and costal margin, four and a half inches to the right of umbilicus, there was tenderness on pressure, dulness on percussion, and a sense of resistance apparently beneath the abdominal muscles, the latter appearing to move independently. The margin of the liver could not be felt owing to the fat condition of the patient, but an area of resonance existed to the extent of about an inch between the costal arch and the dull space.

On October 8th a fulness in the right side of the abdomen was noticed, chiefly in the upper part of the lumbar region, and here a rounded semi-solid lump about the size of a cricket-ball could be felt. The patient was suffering more pain, and her general health appeared to be getting daily more impaired. I therefore determined to explore the swelling. Accordingly, on October 10th, I aspirated the tumour, using Coxeter's instruments, and drew off ten ounces of brown, flaky-looking fluid, which was followed by six ounces more of greenish-yellow pus, some of which was mixed with the fluid first drawn. The wound was then closed, and the aperture sealed with cotton-wool and collodion. The next day the urine passed was quite clear, contained one-fourth albumen, and deposited lithates on standing, but no pus-cells could be found on microscopical examination. The pain and tenderness became less, and the patient gradually improved in health till a fortnight after, October 25th, when she again experienced a succession of rigors, and passed thick urine in all respects similar to that before noted.

On November 1st the swelling in the right flank again appeared. This was again aspirated, and sixteen ounces of pus withdrawn. The cavity was then washed out with a solution of Condy's fluid and water, and the aperture closed as before. The same evening the urine passed was perfectly free from pus.

From this time she steadily improved and recovered in a fortnight. I have on several occasions examined her since, but could detect no swelling, and she has remained well.

Burwell, Cambridge.

NOTES FROM TASMANIA.

By HENRY NAYLOR, L.R.C.P., L.R.C.S.

ACUTE GASTRIC CATARRH COMPLICATING RHEUMATIC FEVER.

THE poison which circulates in the blood in rheumatic fever, causing inflammation of the lining membranes of the joints, seems also to produce a similar effect on mucous membranes, as occurred in a case which came under my care. When the attack commenced, the woman was under the treatment of another practitioner, but when she came under my care the acute symptoms of the rheumatism had disappeared from the joints, but she was very low from all the symptoms of gastritis. The treatment I adopted was the internal administration of bismuth, with dilute hydrocyanic acid, and the tincture of yellow chinchona. She was so low from the constant vomiting that I gave her a wine-glass of champagne every three hours, and her diet was nothing else but milk (skimmed). Externally, I applied cloths soaked with laudanum to the epigastrium, which seemed to relieve the distressing sickness. She went home quite well in a fortnight, and is now stouter than she was before she was ill.

SCALP WOUND FOLLOWED BY CEREBRAL SYMPTOMS.

After a wound to the head, if brain symptoms come on, they generally do so in two or three days, if they do not occur at once. William B—— had a severe wound inflicted on the left side of his forehead by the falling branch of an old tree. He was insensible for a little while, but soon got up and walked home, some four miles, and only suffered with a slight headache for a day after. The wound was dressed, and healed in four days. Eight days after the accident, during which time he had been at his work, I was sent for to see him. While walking across a room he was suddenly seized with giddiness, and at the same time felt his legs give under him. He then had to go to bed. When I saw him he was delirious, had convergent squint on the left side, and was very thick in his speech; his limbs were not paralysed. The next day he was comatose, and passed his urine and fæces involuntarily. I opened his bowels with a large dose of calomel, and rubbed the iodide of mercury ointment on each side of his head three times. I gave directions to pour cold water over his head three times a day. On the fourth day the symptoms yielded to the treatment, and he was able to distinguish people, and speak, though thickly. The squint continued also. In a week an attack of dysentery supervened, and, owing no doubt to the revulsion this effected, the cerebral symptoms abated quickly, the squint disappearing, and the speech becoming more distinct. The dysentery was treated with ipecacuan powder, and a diet of skimmed milk, and in a month the patient was able to leave his bed, and read the newspaper.

Green Ponds, Tasmania.

THE Queen's College, Cork, has obtained Mr. Grubb's equatorial telescope, which was lately exhibited at the Paris Exhibition and received a gold medal.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

PROLAPSUS RECTI; REPEATED LINEAR CAUTERISATION; CURED.

(Under the care of Mr. BRYANT.)

THE following notes were taken by Mr. J. T. J. Morrison.

M. J. P——, a domestic servant, aged twenty, was admitted into Lydia ward on June 11th, 1877. She had always been delicate, but had never had any disease to lay her up. Both her parents, and several brothers and sisters, had died of phthisis. Twelve years before, after going to stool, the bowel came down upon one occasion, and remained prolapsed for several days, but was restored by a surgeon. When sixteen years old she discovered that she had thread worms, which continued to cause great discomfort up to within a few weeks of admission. She placed herself under the care of a medical man, and at last got rid of them, various remedies having been employed, both internally and locally.

Two months before admission, after using an enema, the bowel came down, and any exertion was sufficient to cause prolapsus, so that for four days she had been obliged to keep a pad, supported by straps, upon the anus to prevent prolapse occurring. For three months there had been a white glairy discharge from the anus, and at times, whilst she had been returning the bowel, there had been much hæmorrhage. There had always been a great tendency to constipation.

On admission, the orifice of the anus was large. Examination per rectum could detect no polypus nor abnormal growth, but the mucous membrane was very flaccid, and when, a few days later, the mucous membrane became prolapsed for many inches, it had a purple, congested appearance.

On June 19th, chloroform being administered, the prolapsed rectum was cauterised by means of the thermo-cautery in longitudinal and transverse lines. The margin of the anus was also cauterised, and the bowel was then returned within the anus. The patient passed a sleepless night, owing to pain in the rectum. A quantity of débris, consisting of shreds of mucous membrane, were passed per anum. There was considerable tenderness about abdomen. Pieces of ice were passed into rectum.

On the 21st there was less pain. Temperature 98·6°. The bowel had not been again prolapsed. Three days later there was neither pain nor discharge.

On the 27th the bowels had not acted since the operation. She was ordered an enema of gruel and oil. This having no effect, one ounce of castor oil was given, and acted freely. More blood was passed, and the rectum prolapsed about an inch, but returned spontaneously. A castor oil enema used three days afterwards had no effect.

On July 1st an enema of soap was used with better effect, but was followed by slight prolapse.

On the 7th a prolapse occurred when the patient made any attempt at straining, and bled until returned. No pain in defecation.

She was better and worse by turns for nearly three weeks, but the prolapse occurred after each action of the bowels, and she was troubled a good deal with headache and neuralgia.

Chloroform was again given on the 24th, and the prolapsed rectum was cauterised as before, a morphia suppository being afterwards introduced. There was great pain after the cautery, and during the night and the following day she was very sick, and suffered severely from pain in the abdomen and the rectum. A suppository was given. On the 26th the bowel prolapsed twice whilst retching, and bled a little, and it had to be supported with a pad. Next day the pain still continued, but the sickness was better. She had been unable to micturate, and in the evening her urine was drawn off with catheter. On the 28th she was better in all respects, and was ordered twenty drops of tincture of hyoscyamine with an ounce of saline mixture three times a day.

During the month of August a small portion of the mucous membrane came down whenever the patient sneezed or strained. The rectum was more or less painful, with occasional discharge; the bowels were constipated. On the 28th of August the mucous membrane was again cauterised, leaving intervals of sound tissue to cause good contraction during cicatrisation. A suppository was given. The patient suffered a good deal from vomiting afterwards, and had abdominal pain. Catheterism also had to be resorted to.

After a week there was scarcely any pain; and on Sept. 6th the bowels were relieved without prolapse, but there was much pain, this being the first motion for ten days. Next day an enema was given, which relieved the bowels; motions very solid; no prolapse. On the 11th half an inch of the bowel prolapsed, returning of its own accord; but on the 22nd it prolapsed an inch and a half, and would not return without manipulation, and it prolapsed again on the following day. On Oct. 9th the prolapsed portion was again cauterised and returned through the anus. On the 12th there was severe pain, the discharge from the anus was plentiful, and there were pain and a depressing sensation in the stomach; temperature 98·6°. Chloral hydrate gave the patient a quiet night. On the 19th the bowels had acted five times after an enema, there was acute pain, and she was very sick. On Nov. 1st the bowel was prolapsed, but returned immediately. Acetate of lead ointment to be applied. The pain was less after using the ointment, but the discharge and bleeding continued for several days, and at the end of a week there was fissure of the anus, which was increased by the fingers.

A tannic acid suppository, containing a grain of opium, was used on Nov. 19th, to constringe the anus and lower part of the bowel, and on the 22nd quinine mixture was ordered. The bearing-down pain was not so bad. On the 24th the opium was left out of suppository, as it produced great sleepiness. On the 27th the patient had been about the wards some days without any ill result. There was only slight prolapse when fæces were being passed, but the bowel returned immediately. There was very little pain or discomfort.

PROLAPSUS RECTI; CAUTERISATION WITH NITRATE OF SILVER; CURED.

The following notes were also taken by Mr. J. T. J. Morrison:—

Elizabeth B——, an emaciated and ill-nourished child of four years old, was admitted into Lydia ward on the 21st June, 1877, with considerable prolapse of the rectum, about three inches of the mucous membrane being protruded, congested, and in several places excoriated. She had been subject to this prolapsus for some months, and although the prolapse could easily be reduced, yet, owing to the want of power in the sphincter, the bowel could not be retained. At the time of admission there was a slight purulent discharge from the vagina.

On June 25th chloroform was administered, and the whole surface of the protruded bowel was cauterised with nitrate of silver, and then returned. A pad was applied on either side of the anus, and another directly over it, and supported by a band of strapping. The nitrate of silver gave great pain after its application, but she became more comfortable. She passed her fæces involuntarily.

On July 5th there was still no power to retain the fæces.

On the 19th there had been no recurrence of prolapse since the cauterisation. The child had a healthy, tolerably firm motion once a day, and the sphincter seemed to have recovered its tone. There was very little discharge from the rectum, and none from the vagina.

POLYPUS RECTI; REMOVAL; RECURRENCE; OPERATION; RELIEVED.

The following notes were taken by Mr. H. Hine.

Horace W——, a clerk, aged fifty, was admitted into Job ward on the 8th of October, 1877. He had been a patient in March, 1875, under Mr. Bryant for prolapsus ani and polypus recti, the latter of which was ligatured. He suffered no inconvenience, excepting irregularity of bowels, until two months before the second admission, when he had great

pain and some bleeding during his motions. A fortnight after he saw a medical man, who told him he had an ulcer in rectum. This appeared to have healed. He consulted Mr. Bryant soon after, who found a lump about the size of a marble half an inch from anus. There was no prolapsus. On Oct. 9th the polypus was found, ligatured, and then cut off. The patient complained of pain for some days, and on the 15th he took castor oil, which acted on the bowels. He was discharged relieved on the 17th.

MANCHESTER ROYAL INFIRMARY.

REMOVAL OF ASTRAGALUS FOR COMPOUND DISLOCATION.

(Under the care of Mr. HEATH.)

FOR the following interesting notes we are indebted to Dr. H. Tomkins, late senior house-surgeon, now resident medical officer, Monsall Fever Hospital.

W. S——, a strongly built man, aged thirty-four, of intemperate habits, was brought to the infirmary on the 27th April, 1878, having been thrown from the seat of an omnibus which he was driving. On examination he was found to have sustained a compound dislocation of the astragalus of the left leg. A wound two and a half inches in length extended from the internal side of the tendon of the tibialis anticus on the dorsum of the foot downwards and backwards towards the heel, through which the astragalus and the internal malleolus projected, the foot being completely turned outwards. The ligaments between the under surface of the astragalus and the os calcis were completely torn asunder, and also those between the astragalus and the scaphoid, exposing the whole of the under and front surfaces of the bone. The internal lateral ligaments were also torn considerably, and a small piece of the outer side of the bone was split off.

After placing the patient under chloroform an attempt was made to reduce the luxation, but without success; it was therefore decided to remove the astragalus and attempt to save the foot before resorting to further measures. The remaining attachments of the astragalus were therefore divided, and the bone, from its already loosened condition, was easily removed; the small fragment broken off from the outer side was also severed from the outer ligaments and removed. In doing this the posterior tibial artery was unfortunately wounded, and was ligatured with catgut. The foot having been brought into position, and a splint with a side piece adjusted to the outer aspect of the leg and foot, the wound was syringed out with glycerine and carbolic acid, brought together with four sutures, and a drainage-tube was inserted right across the joint. Dressings of carbolic glycerine were applied, and forty minims of Battley's solution were given.

He passed a good night, and in the morning was free from pain. Temperature 99·8°. Dressings not removed. On the 29th the wound was dressed with carbolic glycerine. It looked very well. There had been some slight hæmorrhage; no suppuration. Morning temperature 100·4°. On May 1st the wound was again dressed. There was slight suppuration, and it was syringed out with carbolic glycerine. Leg and foot rather swollen. Morning temperature 101·6°; evening, 102·4°. Patient restless.

The wound was now dressed daily, suppuration being freely established.

On May 4th patient complained of much pain up the leg, which was swollen, hot, and red, but the wound itself looked healthy, and two of the sutures were removed. The skin of the leg being very tense and dry, it was painted with compound tincture of benzoin. Morning temperature, 101·4°; evening, 103·8° (this being the highest point reached throughout the progress of the case). Tongue dry; pulse 120, weak. He took but little nourishment; stimulants ordered freely. From the 4th to the 13th the patient continued in a very shaky condition, temperature ranging from 99·8° to 102·6°, semi-delirious at night, dry tongue, much thirst, and with difficulty made to take nourishment. The leg and foot continued very swollen, painful, and suspiciously red, so that for some few days erysipelas was feared, but the wound and its immediate neighbourhood continued to have a fairly healthy appearance. Numerous bullæ formed on the leg, which were painted with tincture of benzoin, and the wound was syringed and dressed daily with carbolic glycerine.

After the 13th the constitutional disturbance slowly subsided and the general condition improved, but the skin gave way on the outer side of the ankle, and a communication was established right through the joint. The limb was then placed upon a back-splint with sole-piece. The wound progressed favourably, but the healing was very tedious, and it was not until the beginning of July that he was able to get up. On the 27th July both wounds were healed, and there was but little pain when passive motion was attempted. A small sore on the back of the foot, from long contact with the splint, caused him more pain than the original wound.

He was discharged on August 12th, able to get about very well with the aid of crutches, but could not yet bear much weight upon the limb. There was a limited amount of movement in the false joint, which will probably become more extensive by use.

Remarks.—This case, although extremely tedious in its progress, affords a good illustration of the benefits of conservative surgery, and although the constitutional disturbance was far in excess of what might reasonably have been expected after an amputation, yet saving the man's foot certainly compensates for the extra time and trouble taken in so doing.

CHELTENHAM HOSPITAL.

POPLITEAL ANEURISM SUCCESSFULLY TREATED BY REPEATED PROXIMAL APPLICATIONS OF AN ELASTIC COMPRESSOR.

(Under the care of Dr. G. B. FERGUSON.)

THIS case illustrates a simple, and in this instance successful, modification of the treatment now commonly and rightly known as Reid's.

The patient, H. T——, aged sixty-nine, a cabinet maker, recommended by Dr. Gooding, of Cheltenham, was admitted into the hospital on March 9th last with popliteal aneurism.

He was a good-complexioned man, of good general health, rather above the average stature, and of temperate habits. The aneurism was very apparent, being about the size and shape of a large hen's egg, and expanding forcibly and characteristically at each pulsation. The organs generally were sound, and his femoral, radial, and other arteries not palpably atheromatous. The circumference of the right knee (the side of the aneurism) was sixteen inches, that of the left knee thirteen inches. There was much œdema of the right leg, and continuous aching pain in the leg and foot. The aneurism had been noticed for three months. It could be ascribed to no distinct cause, and had recently increased rapidly in size.

The patient was at once confined to bed and given ten grains of iodide of potassium in a bitter infusion three times a day, with a view to favourably dispose his blood and his aneurism, the first to clotting, the last to contraction (accordantly with the recommendations for the treatment of aneurism given by Dr. Balfour, of Edinburgh, in his recent work on Cardiac Diseases). With a similar aim his diet was greatly restricted as to liquids.

Seven days of this preparatory medical treatment having passed, though without much apparent improvement, and the opinion of the other medical officers of the hospital being favourable to the treatment by pressure, this was commenced on March 16th, at 11 A.M., by the simple application of an india-rubber cord, of about the thickness of the little finger (Esmarch's compressor), twice around the circumference of the junction of the middle and lower thirds of the thigh, the ends of the cord being pulled and secured just so tightly as to stop the aneurismal pulsation. No preparatory elastic bandaging of the limb was practised, nor was the patient directed previously to get out of bed so as to distend the aneurismal sac, as one distinguished surgeon has recommended. The leg and foot, however, as a precaution against gangrene, were enveloped in cotton wool and loosely covered by a flannel bandage.

The mode of procedure may be thus briefly tabulated:—

One hour of the elastic compressor: contraction of aneurism, but no solidification.

Two hours and twenty minutes of digital pressure: no further change.

Half an hour of compressor: notable solidification, but still appreciable pulsation.

One hour of digital pressure: no further change.
Half an hour of compressor: aneurism much shrunk and very hard, but still faintly pulsating.
One hour and twenty minutes of digital pressure: no further change.
One hour of compressor: pulsation now very dubious.
One hour of digital pressure: positively no further pulsation, and aneurism shrunk and hard.

The active treatment thus occupied between eight and nine hours, the cord having been applied for three hours in all, being removed as often as the comfort of the patient required it, and being reapplied also mostly as soon as he felt ready again to bear it. For some few subsequent hours the patient himself moderated digitally the current through the upper part of his femoral artery, and thus the treatment closed.

On the next morning (March 17th) the note was: Had slept well; no pulsation of aneurism. Temperature 98°; pulse 80. Less pain than before treatment; no albumen or sugar in urine, sp. gr. 1020.

On March 18th he had again slept well. Temperature 98·4°; pulse 68. A small artery was seen actively pulsating near the inner border of the patella, and a large one over the centre of the internal condyle. A good deal of darting pain was complained of about the ankle and great toe.

March 19th.—Had slept well; less pain than on preceding day, and this relieved by friction with opium liniment.

25th.—Circumference at knee 14½ in. (Before treatment it was 16 in.)

On April 8th, a small artery was noticed pulsating over the hardened aneurism. At this date, three weeks after the treatment, he was allowed to get up for a short time every day. He was kept in the hospital some six weeks longer to prevent his returning prematurely to work. When he left he was able to walk fairly, and without pain, although, after long hanging, the affected leg was still prone to swell somewhat.

Remarks by Dr. FERGUSON.—The case is noticeable for the age of the patient (sixty-nine), this being much the eldest subject hitherto thus treated; for the simple nature of the treatment, all preparatory or concomitant elastic bandaging, as in all the previous cases, being dispensed with; for the comparatively loose manner in which the elastic was applied, only just so tightly as to stop the pulsation, any greater degree of tightness being found largely to increase the unavoidable, although for a time quite bearable, pain of the application; and, beyond all, for the four times repeated application of the bandage.

There can be no question that the aneurism was cured by the elastic pressure solely, which, however, without the intervals of digital pressure (during which nothing was lost), could not have been sufficiently long endured without anæsthetics (to which the patient objected) to secure a successful result. Possibly, too, the preparatory medical treatment was not without some salutary predisposing influence. The digital femoral pressure, which thoroughly commanded the pulsation, was easily made with the assistance of a cylindrical bag of shot of an effective weight of 14 lb. suspended over a pulley, and acting on the fingers—an arrangement which was found to be far more comfortable, and not less competent, than a tourniquet.

Excepting a short period when an intelligent convalescent assisted us in maintaining digital compression, the entire treatment was easily, and without fatigue, carried out by the junior house-surgeon, Mr. H. E. Paxon (to whom my best thanks are due), and by myself.

Nearly all the previous cases of this treatment, differing in details only, have been recorded in THE LANCET. Mr. Thomas Smith (May 26th, 1877) narrates a successful case, and gives the following references to successful cases:—Reid's original case (Sept. 25th, 1875, and Aug. 5th, 1876), Wagstaffe's (vol. ii. 1876, p. 461), F. A. Heath's (vol. ii. 1876, p. 638[1]), and J. Wright's (vol. i. 1877, p. 163); this was a case of femoral aneurism in Hunter's canal. More recently three successful cases of popliteal aneurism have been recorded in THE LANCET: one by Mr. Tyrrell, of Dublin (vol. i. 1877, p. 940); one by Mr. Croft, of St. Thomas's Hospital (vol. i. 1878, p. 85); and one by Mr. Manifold, of Liverpool (vol. i. 1878, p. 86). Besides these, Mr. Cornish, of Taunton, has recorded a case of aneurism of the anterior tibial artery successfully treated by the elastic bandage (vol. i. 1878, p. 238). Croft's and Wagstaffe's cases are noteworthy as having been treated by an elastic bandage only applied to the whole limb—i.e., without the usual addition of the compressor proximally. An unsuccessful case is recorded (March 23rd, 1878), and two unsuccessful cases are mentioned in Mr. Smith's paper, making, with the present case, ten recorded successes against three recorded failures.

I hope I am justified in my expectation that the method of repeated application (if required) of the elastic cord will be found hereafter considerably to diminish the number of failures after the employment of this facile method, first employed by Staff-Surgeon Reid.

[1] Mr. Smith incorrectly refers to this case as reported in the British Medical Journal.

Reviews and Notices of Books.

The Organic Constituents of Plants and Vegetable Substances, and their Chemical Analysis. By Dr. G. C. WITTSTEIN, Translated by Baron FERD V. MUELLER. pp. 332. Melbourne: M. Carron Bird and Co. 1878.

WE have been very much pleased with this little work. It supplies a hiatus that has been felt. It is not everyone who can afford to purchase the ponderous tomes of Pereira, or Watts's Dictionary of Chemistry; and yet all are desirous at times of being able to refer to some authority who can be relied upon for the latest and best information in regard to the nature or composition of the essential principles of the several drugs and vegetable remedies they are in the habit of prescribing. The volume before us will supply the practitioner with just the information he requires. It contains no therapeutics, but is limited to an account of the chemical properties of the substances mentioned. The several substances are given in alphabetical order, and are easy to find. We give a single example.

"*Ergotin.*—One of the three alkaloids (ecbolin, ergotin, and trimethylamin) of ergot. Precipitate the aqueous extract of the drug with acetate of lead, free the filtrate from lead by sulphuret of hydrogen, concentrate the liquid, and add pulverised chloride of mercury; as long as a precipitate ensues, filter and precipitate the filtrate with phosphomolybdic acid; digest the precipitate while still moist with water and carbonate of baryta, filter, and evaporate the liquid to dryness. Ergotin closely resembles ecbolin, but differs from it in not being precipitated by the chlorides of mercury and platinum (unless under the addition of ether-alcohol) and by cyanide of potassium. The name 'ergotin' was formerly applied to another substance obtained from ergot, prepared by boiling the pulverised drug, previously freed from fat by means of ether, with alcohol, evaporating the tincture, adding water to the residue, and collecting the separated flocky mass. A fine reddish-brown powder; smells specifically, especially when hot; tastes acrid, bitter, and aromatic; decomposes by heat without fusing; dissolves only by traces in water and in ether, with red-brown colour in alcohol, also in alkalies, not in diluted acids."

The work is divided into two parts, each subdivided into three sections. The first division of Part I. treats of the nature and mode of origin of the proximate constituents of plants, with a table of their molecular weights; the second gives a synopsis of those plants which yield the proximate constituents described under Section 1; and the third a list of plants from which organic constituents are prepared. Part II. treats of the apparatus required for phyto-chemical analysis, the chemicals required, and, lastly, contains a very good account of the general course of systematic phyto-chemical analysis. The translation has been well done by Baron F. v. Müller, though we must admit we occasionally trace the hand of a foreigner.

Cyprus, Historical and Descriptive. Adapted from the German of FRANZ VON LÖHER, with much additional matter, by Mrs. A. BATSON JOYNER, and two maps. London: W. H. Allen and Co. 1878.

WE are introduced to the island in this book without an introductory sentence of any kind whatever. The writer

drops anchor off Larnaka one fine day in the spring of last year, and at once sets to work to explore the town. Pausing frequently (but not too frequently) by the way to revert to some old historical episode, usually of the warlike variety, we are taken successively to and into Larnaka, Nikosia, Buffavento, up Olympus, to the temple of Venus, to Raffo and Kuklia, to St. Nicholas and Limasol, and finally to Amathus. The author gives a very natural and pleasant account of a trip through the island, which seems to have occupied some weeks, and, commencing in April, included at all events a fine-weather time. There is something of the enthusiasm that tints naturally the writings of all Germans concerning new countries, but the historical notes so temper this proclivity that it does not reach, or appear to reach, the exaggerated stage. There are some interesting notes about the trees and forests of Cyprus, from which it appears that the latter, some years ago, were very extensive, but that all over the island the wanton destruction of trees by the Cypriotes is observable. The carelessness of the wandering shepherds often causes great destruction in the woods, and though the fertility of the island is marvellous, this heedlessness has spoilt many of the most beautiful districts. The trade in resin has been conducted with great recklessness, and, according to the author, must be entirely put down, or only permitted under heavy restrictions. Whole tracts of country require entire replanting, and many of the intelligent natives believe that the introduction of the eucalyptus would be very desirable, especially upon the plains and table rocks, so many of which require to be covered with some sort of vegetation. We have already quoted Franz von Löher as speaking favourably of the climate, but it must be remembered that he was in Cyprus at probably the most healthy time of the year. We can recommend the book as the best of its kind that has come under our notice since Cyprus was transferred to the paternal care of the British Government.

OUR LIBRARY TABLE.

An Essay on the Systematic Training of the Body. By Charles Henry Schaible, M.D., &c. pp. 124. London: Trübner and Co. 1878.—This essay is one published in memory of Friedrich Ludwig Jahn, on the occasion of the first centenary festival of that distinguished man, of whom there is an excellent etching by Hubert Herkomer placed as a frontispiece, with a brief, but intelligently-written, biography. The object of the volume is the advancement of physical education in schools; and the writer, profoundly penetrated with the truth that for the development of a healthy mind the body must be healthy, proceeds to show the great importance that was attached to gymnastic exercises by the ancients, the benefit that is to be derived from their cultivation, and the evil results of their neglect. No objections can be advanced against the practice of athletic exercises of every kind, providing only that, in the pursuit of physical improvement, so great a degree of fatigue is not induced as to interfere with intellectual activity. We do not want our boys to grow up weak and puny in body whilst they are intellectually overworked. On the other hand, it is quite conceivable—and, we think we have seen some examples—that the muscles may be developed out of all proportion to the mind, and an ignorant Hercules be the result. Dr. Schaible's whole argument, however, tends to show that a well-arranged system of gymnastics constitutes a good means of training both the intellectual and the moral faculties, as well as the physical powers, and in this we are fully in accord with him.

Holmes' Botanical Note-book, or Practical Guide to a Knowledge of Botany. pp. 186. London: Christy and Co. 1878.—This work will constitute a useful companion to the young botanist, and will exercise him in one of the most difficult of all arts—the accurate description of what is really seen. The plan of the work is that on every page are a series of lines, at the beginning of each of which are placed in order from above downwards the words root, stem, leaves, stipules, inflorescence, bracts, sepals, petals, stamen, anthers, carpels, seeds. Thus each part has a line to itself. At the top of the page hints are given in regard to the points that should be attended to in the description. For instance, under the head of leaves, the student is directed to attend to their "venation, position, division, shape, size, margin, consistence, surface, and appendages." At the bottom of the page are lines for the noting of the class, subclass, and natural order. The first fourteen pages are devoted to directions for examining plants, then follows an excellent glossary, arranged in such a manner as to give in succession all the terms applied to the several organs, root, stem, leaf, sepal, petal, &c., and, finally, there are charts by which the specimen which has been obtained and described can easily be referred to its natural order. The work closes with a floral calendar.

The Pocket Doctor. For the Traveller and Colonist. By Harry Leach, M.R.C.P., Medical Officer for the Port of London, Physician to the *Dreadnought* Seamen's Hospital. Second Edition. London: S. W. Silver and Co. 1878.—We have already favourably noticed this little book. The quick appearance of a second edition is some proof that it meets a recognised want. Mr. Leach's large medical experience, especially among sailors, and in various countries, gives to his way of treating subjects a short dogmatic precision very welcome to colonists and travellers. They need to be told in a few practical words how to know a disease, and how best to deal with it, in the unavoidable absence of a doctor. And Mr. Leach tells them. The book should be a part of the library of all travellers and colonists, who should note as well what Mr. Leach tells them to avoid doing as what he advises them to do.

The History of Drink: a Review, Social, Scientific, and Political. By James Samuelson, of the Middle Temple, Barrister-at-Law. London: Trübner and Co. 1878.—Although the author calls the work now before us a sketch, he manages to consider his subject from historical, classical, cosmopolitan, and social as well as moral aspects. There are chapters on the Chinese, the followers of Zoroaster, the ancient Hebrews, the Egyptians, and the Americans, on Sweden and its licensing system, and on the ancient drinking customs of Greece and Rome. The legislation of the subject is freely set forth, and though Sir Wilfrid Lawson, Dr. Richardson, and the late Dr. Parkes are all referred to in turn, perhaps the most meagre part of the work is that which relates to the effect of alcohol on the masses at the present day. So many interesting particulars are given on the manners and customs of ancient and mediæval races in connexion with the use of spirituous liquors, that the writer should have gone a little further, and endeavoured to show how, if at all, the political or social advancement of a particular people was influenced by its drinking habits. "The History of Drink" is a pleasantly readable work, and recommendable because it fills up a gap that has existed for some time in the literature of this important subject.

Una pagina para la Historia de los Pólipos Naso-faringeos. Por el Dr. D. Juan Creus y Manso. Madrid. 1878.—Dr. Juan Creus y Manso reports a case of naso-pharyngeal polypus in which he performed the preliminary steps required for removal of the upper jaw, throwing up the lip and nose, and thus exposing freely the nasal cavity. A large tumour presented itself, and, though with much bleeding, was effectually removed. The actual cautery had to be used to restrain the hæmorrhage, but the result was satisfactory.

REPORT OF THE COMMITTEE ON THE ARMY MEDICAL DEPARTMENT.

LAST week we were able to give only a very brief sketch of the recommendations of the Committee appointed to inquire into the state of the Army Medical Department as regards the supply of candidates. We propose now to notice the Report more in detail. The Committee began their labours by an inquiry into the results of the competitive examinations during the last ten years, with a view to ascertain whether the difficulty of obtaining candidates really existed, and whether it was increasing or diminishing. They have given these in a tabulated form, and it appears that from 1868 till 1873 the candidates were always in excess of the vacancies; while from 1873 till 1878, with the single exception of the summer examination of 1874, there was always a deficiency, which amounted on two occasions to more than 50 per cent. The Committee attribute this decrease, in part at least, to the competition of the colonies, the great steamship companies, and the mercantile marine, for medical officers, and to the number of appointments in connexion with the Local Government Board, increasing the emoluments of surgeons in country practice, and thus holding out greater inducements to young medical men to settle at home. They also refer to the fact, pointed out in a report from the medical school of St. Thomas's Hospital, that the ratio of medical practitioners to population has been gradually decreasing during the last thirty years, and the supply "has thus become scarcer." Without, however, attaching undue importance to the circumstance, we may point out that the date of the commencement of the deficiency corresponds with that of the issue of one of the warrants, some of the provisions of which have been a subject of complaint. Having satisfied themselves of the existence of the deficiency and of its progressive increase, the Committee proceed to consider the specific causes which have operated to prevent candidates coming forward, and these they divide into two classes. 1. The alleged grievances of officers now serving or who have served in the Department. 2. The direct discouragement afforded by the calculable prospects in the Department itself. Under the first of these they include (*a*) scales of pay and system of retirement; (*b*) loss of forage; (*c*) loss of a soldier servant; (*d*) difficulties as to quarters; (*e*) sick half-pay; (*f*) relative rank and honours; (*g*) an unpublished roster; (*h*) non-discrimination between seniors and juniors in the assignment of duties; (*i*) questions of leave; (*k*) difficulty of exchanging; (*l*) generally, that faith has not been kept by Government, and especially that the Royal Warrant of 1858 has been departed from; (*m*) the abolition of the regimental system; (*n*) the increased difficulty in obtaining promotion to the rank of deputy surgeon-general. Under the second head are stated—(*a*) the ten years' system of service; (*b*) the system of admission by half-yearly competitive examination; (*c*) the low rates of pay and pension compared with civil medical life and with other professions.

We shall now examine briefly the opinion of the Committee on each of these points.

First, with regard to *scales of pay and retirement*, they state that "there is ample evidence that in the last thirty years the average earnings of civilian medical men have been augmented in a ratio beyond any increase given to army medical officers, except, perhaps, in the lowest rank." They therefore recommend an increase in the pay and retirement of all ranks. But, in addition to this, they make a valuable recommendation that an officer should be permitted to retire at any time after the completion of ten years' service, with a gratuity varying according to length of service if he has not completed twenty years, and retired pay after that period, as at present, but without the necessity of appearing before a medical board and obtaining a certificate of impaired health. We shall consider the proposed scales of pay and retirement when we come to the second category. We shall also postpone the question of (*b*) *loss of forage* to a later period.

(*c*) *The loss of a soldier servant*, consequent on the abolition of the regimental system, is admitted to be a hardship, but is considered to be adequately compensated by the grant of staff instead of regimental allowances. We confess we do not see the objection to granting medical officers the same allowance as the officers of the Royal Engineers—viz., 1*s.* 6*d.* a day. The Committee say it "would place medical officers on a footing different to other staff officers, who would have fair grounds for demanding an equal allowance." But the Committee seem to have forgotten that staff officers get staff pay in addition to the pay or half-pay of their rank; the cases are therefore not similar. On the other hand, the medical officer is in a position analogous to that of a Royal Engineer, both being officers of scientific corps, and unable to obtain soldier servants from their corps. The Committee make a suggestion as to medical officers being supplied with servants from the Army Hospital Corps, but with our knowledge of the difficulties that have attended the raising of that corps, its limited establishment, its higher rate of pay, and the amount of work it has to do, we feel certain that this will never be carried out.

(*d*) *Difficulties as to quarters.*—The Committee state that the only occasion when these can arise is when a medical officer is stationed with troops in barracks, and they recommend that, where this is necessary, a suitable quarter should be set aside permanently for the medical officer. They also suggest that this residence in barracks should be reduced as much as possible.

(*e*) *Sick leave and sick half-pay.*—The Committee recognise the harshness of the present rule, by which an officer whose ill-health has been contracted "in and by" the service is placed on half-pay after having had six months' sick leave, and they accordingly recommend in such cases leave on full-pay up to a year, and after that period, in case of non-recovery, half-pay under the regulations applicable to combatant officers.

(*f*) *Honours and relative rank.*—The Committee "sympathise with the medical officers in their complaint that honorary distinctions do not, as compared with other corps, fall sufficiently to their share." It has been hitherto the custom to class medical officers with the administrative departments, as the commissariat, the store, the veterinary, and the chaplain; but the Committee consider that the duties of the medical officers partake more of the nature of a combatant position; they go under fire in battle wherever combatants go, and maintain an incessant combat with disease and death. The result is that their death-rate is greatly above that of combatant officers. The actuaries have calculated that of 1000 young men who enter the army as combatant officers, 571 live till sixty, while of the same number who enter as medical officers, only 423 attain that age. The Committee think, therefore, that as regards honours, they should be associated with the combatant rather than with the administrative branches. They recommend, as we stated in our last, that the medical officers should receive honours, rewards, and good-service pensions in the same proportion as the combatant officers. They also recommend that the honorary appointment of physician or surgeon to Her Majesty should carry with it the rank of deputy surgeon-general, to be borne as supernumerary to the establishment till the officer would have been promoted in the ordinary course; that the restriction of the relative rank of surgeon-major to that of the *junior* lieutenant-colonel should be abolished, and he should rank according to date of commission; that the surgeon should rank as captain from the date of his appointment, and the candidate, under the title of "probationer," rank as lieutenant. The Committee also recommend that all departmental precedence should be abolished, and that the departments of the army be arranged in the Army List in alphabetical order; and that in the rare cases in which questions can arise as to the precedence of the army hospital with other departmental corps the ordinary rule of priority according to dates of formation be followed.

(*g*) *An unpublished roster.*—It appears that the roster is now placed in charge of the Surgeon-General of the Medical

Branch, who has instructions to furnish any medical officer, making written application, with a statement of his position on the roster, or to show it to any officer applying personally. The old system of keeping the document knocking about in the waiting-room was open to considerable objection. The Committee think no change is needed under this head.

(*h*) *Non-discrimination between seniors and juniors in the assignment of duties.*—This is one of the consequences which might have been anticipated from the abolition of the rank of assistant-surgeon. Indeed one of the arguments adduced for such a course was that, since the compounding of medicine was transferred to men of the Army Hospital Corps, the duties of all medical executive officers were alike. The Committee are of opinion that the allotment of duties may be safely left to the discretion of the administrative officers of the different stations, and that no fixed rule can be laid down without injury to the service.

(*i*) *Questions of leave.*—The Committee hold, and we think justly, that the claim of medical officers to have the same amount of leave as regimental officers is unreasonable. They are granted the same amount as combatant staff officers; and they are different from regimental officers in this respect that their duties are of such a nature as cannot be performed by any but a medical officer, and cannot be postponed till a more convenient season. We confess we think they have little to complain of when they get their two months' leave annually, which it is stated they do under ordinary circumstances.

(*k*) *The difficulty in exchanging.*—The Committee state that, although for some time exchanges were partially refused during the transition from the old to the present system, "of late no exchange has been refused except the officer has been an undue length of time at home, or exchanges with an officer who, the Director thinks, should not be sent abroad in consequence of the state of his health." If this arrangement is adhered to it seems to be not unreasonable.

We now come to an important, difficult, and, as formulated by the Committee, somewhat delicate question. (*l*) *Generally, that faith has not been kept by Government, and especially that the Royal Warrant of* 1858 *has been departed from.* We take exception to this as not stating accurately the complaint made by the medical officers. We should rather put it thus: The frequent and unnecessary interference of the military authorities with the provisions of the Warrant of 1858 and the privileges conferred by it, and the withdrawal of certain of those privileges without any satisfactory reason being assigned, and without any compensating advantage being given. In considering the question the Committee review the Warrants of 1858, 1867, 1873, and 1876, and show in a tabular form the benefits conferred upon the Department by each. They conclude that "it must be admitted that the Royal Warrants of the last twenty years have *progressively improved* the status, pay, and promotion of army medical officers." But we would observe that it is quite beside the question to consider the advantages gained by the Warrant of 1858, as one of the principal subjects of complaint was the departure from its provisions. With regard to the others, we are not aware that any complaint was ever made of that of 1867; that of 1873 was decidedly unpopular, because it cut off the forage allowance, and gave nothing in exchange except an empty alteration of the titles of the different ranks; while that of 1876 did not affect existing officers, and has been acknowledged by the Committee to be a failure. But the Committee have ignored various important acts of the military authorities, to which we shall now refer. Before doing so, however, we must distinctly state that we do not call in question for a moment the right to alter the condition of any department by Royal Warrant, or the necessity for such a course as the conditions of the country and of the army itself alter. What we do object to may be gathered from the following statements. The Warrant of 1858—known in the Department as Lord Herbert's Warrant, and looked upon as its Magna Charta—granted to staff or regimental surgeons the relative rank of major "according to the date of his commission"; but in March, 1861, a Royal Warrant was promulgated, which placed him always as *junior* of that rank. This gave rise to so much dissatisfaction that in May, 1863, the Warrant was cancelled, and rank, according to date of commission, restored. The Warrant of 1858 also directed that relative rank should carry with it "all precedence and advantages attaching to the rank with which it corresponds, except as regards the presidency of courts martial." But in 1861 the Field Marshal Commanding-in-Chief issued a confidential memorandum directing all officers commanding, in ordinary committees of officers, whatever might be the subject of inquiry, *not* to place a medical officer upon it *if he were senior in rank*, thus contravening the provisions of the Royal Warrant, and depriving the medical officer of that precedence which Her Majesty had graciously accorded him. In the Warrant of May, 1863, which restored the relative rank to the surgeon, a clause was introduced depriving officers holding relative rank of the title to sit as president in Courts of Inquiry, Committees, or Boards of Survey. This Warrant was modified by a General Order of 1867, which exempted medical officers from serving on all but Medical Boards. In 1862 Sir Hugh Rose, the commander-in-chief in India, on an appeal made to him by a medical officer, decided that surgeons of Her Majesty's regiments were not entitled to appear mounted on parade, although they had the rank of field officer, and were entitled to forage for a horse; and this "dismounting" order was confirmed by the Duke of Cambridge. But in 1867 this was reversed in a General Order, which directed medical officers having the rank of field-officer "to provide themselves with chargers and horse-furniture, and to appear mounted when required to attend parade." The Warrant of 1858 declared that the relative rank should, *inter alia*, regulate forage or the allowance in its stead. In the Warrants of 1863 and 1867 the word "forage" was omitted from the clause respecting relative rank, but medical officers still continued to draw the allowance under the regulation of the Warrant of 1858. In 1872, however, an Army Circular reduced the number of horses for which the "non-combatant officers" of the army were to be permitted to draw forage, and this without any notice of the previous provision of the Royal Warrant having been cancelled. In the Warrant of 1873 a clause was introduced, for the first time, that "forage shall be granted to officers of the Army Medical Department for such number of horses as are necessarily kept by them for duty." The operation of this clause was so manifestly unjust to the officers who were deprived by it of their forage allowance, that in November of the same year a Royal Warrant was brought out restoring it to such officers of the Department as were in receipt of it prior to the 1st of March, 1873; but giving no compensation to those who would have become entitled to it by the provisions of the Warrant under which they entered the service. These instances are, we think, sufficient to show that the complaints of the medical officers on this head are well founded.

We have postponed till now the consideration of the forage question, because we think it closely allied with the one we have just discussed. And we cannot but express our regret at the special pleading which runs through this part of the Report. The Committee refer, in the first instance, to the Forage Warrant of 1848, the provisions of which, they say, were substantially repeated in that of 1864, and emphasized in that of 1873. But they also state that the Warrant of 1858 "declared that the claim to forage should be regulated by relative rank," and they have not shown that this condition was ever annulled. The Committee then ask, "What were the rights conferred by the Medical Warrant of 1858?" and they answer the question thus:—"The conditions under which the medical officer is to enjoy each allowance must be taken as those laid down in the Royal Warrant regulating the issue of such allowance generally. The Warrant of 1848 carefully laid down that the horse to be foraged must be actually and *bonâ fide* kept for the public service. We cannot attach any other meaning than that it was necessary for the public service that such horse should be kept." Now we take exception to this interpretation, as we believe it has always been considered that a field officer was entitled to forage *provided* he kept a horse and had it at all times available for the public service. This reading of the Warrant is completely borne out by the W. O. Circular of May, 1869, Clause 126, which runs thus: "The clause which requires that a horse, for which forage or forage allowance is issued, shall be *bonâ fide* the property of the officer is relaxed. In future, the only conditions which will be required are, that the horse is effective, and is *bonâ fide* kept by, and entirely at the disposal of, the officer." This must surely have escaped the notice of the Committee. But if the principle now put forward is to be the rule in future for the issue of forage, are the W. O. authorities prepared to enforce it in the case of the general staff, from the Field Marshal Commanding-

in Chief downwards? We do not believe they are; and if not, surely the medical officers have just cause to be dissatisfied with a rule which is enforced against them, and kept in abeyance in the case of military officers of corresponding rank. In such an event, the proposed scheme of reorganisation may at first draw a number of candidates into the service; although even that is doubtful. But the forage question will be sure to come up again as a grievance when the medical officers find so unjust and disparaging a distinction made between them and the other officers. We would recommend this subject to Colonel Stanley's consideration before he finally decides upon the contemplated changes. The Committee endeavour to show that the cessation of forage "could scarcely be regarded as a pecuniary loss to the officer;" but that is quite beside the question, which is less one of money than of prestige and even-handed justice.

(*m*) *The abolition of the regimental system*, though it deprived a certain proportion of officers of the social advantages connected with a regiment, will have the effect of equalising the amount of foreign service, and will be an undoubted boon to those officers who were not attached to corps; it gives to the medical officers the advantage of staff instead of regimental allowances, and relieves them from the contribution to mess- and band-funds, in the management of which they had no voice. It is one of the consequences of the new organisation of the army. The regimental system, as Lord Cranbrook remarked in bringing forward the Estimates, "has gone, and it would be impossible to recall it."

(*n*) *Increased difficulty in obtaining promotion to the rank of deputy surgeon-general.*—This was chiefly a result of the rule requiring "three years' service in India from every officer allowed to have administrative charge there." The hardship in this particular appears to have been the result of maladministration, the rule having been made and never officially promulgated. This is much to be regretted, and will, we trust, serve as a caution in future changes. It was, we believe, necessary for the effective working of the Department, but for some incomprehensible reason was kept among the *leges non scriptæ*, and thus became a source of injustice in a few cases. The Committee recommend that it be now officially promulgated.

THE PATHOLOGICAL MUSEUM OF ST. LOUIS HOSPITAL.

MEDICAL visitors to Paris should not miss the opportunity of visiting the splendid collection of pathological reproductions which is to be seen at the present moment at the Hôpital St. Louis. This celebrated establishment has been in possession, ever since the year 1866, of a museum containing drawings and models of different skin affections. In that year Monsieur Alphonse Devergie, who had been physician to the hospital for twenty-five years, first had the idea of exhibiting certain drawings which he had had executed by an eminent artist, and demanded of the "Assistance Publique" a convenient building where he might place them. His intention was to create a resort for students and practitioners, where they might become familiar with the ordinary as well as with the rarer forms of skin disease. The Administration complied with the request of the eminent physician, and the museum dates its existence from that time. Its beginning, however, was extremely modest, and the space which had been allotted for its use soon became insufficient for the numerous drawings, models, &c., which had been presented by different dermatologists, amongst whom we may mention Hebra, who gave a fine collection of *aquarelle* paintings. Later on the museum received several grants, which enabled the physicians of the hospital to enrich the collection by several valuable additions. But it is only of late years that the collection has made considerable progress, owing to the private models of MM. Péan and Fournier having been added to the old stock. These gentlemen have courteously lent their private collections to the museum, and it is generally believed that these will also become the property of the hospital at some future date. The whole exhibition of the models is now situated in one of the side wings of the hospital known by the name of Pavillon St. Mathieu, which formerly constituted part of the service of M. Lallier, who has kindly given up one of his wards for the purpose. The room has been elegantly fitted up with glass cases, wherein the models are placed, each with an inscription, naming the disease which they represent. Of these vitrines six are filled with the collection of models of M. Péan, showing all the different varieties of tumours with which he has had to deal in his service, as also many samples of diseases of articulations, bones, genital organs, &c. M. Fournier's collection occupies five vitrines, and possesses examples of all the different syphilitic maladies, from the chancre to the secondary and tertiary manifestations. There are also many reproductions of all the various kinds of skin affections. Some natural preparations complete the exhibition, such as invaginated sequestra, calculi, &c.

As to the models themselves, we shall give an idea of their perfection when we say that they are almost exclusively the work of MM. Baretta and Jumelin, whose reputation has already crossed the Channel, and whose productions are to be seen in large numbers in London. It is naturally impossible for us to give a detailed description of each piece, as their number is considerable—over 450. Some of them are almost lifelike in appearance. We were especially struck with a model of a case of Psoriasis pilaris, where every minute detail has been executed, even to the presence of the hair which covers the skin. Another piece, representing a case of acute Pemphigus, is so natural that one fancies he sees the citrinous liquid under the uplifted epidermis. We must also cite a model of Bursæ affected with emphysema, which possesses the transparency of air. It is difficult to give an idea by these few cases of the perfection of execution of the models. The methods of M. Jumelin and M. Baretta are not quite the same. M. Jumelin models his pieces from nature, whereas M. Baretta takes casts of them. The latter system, we believe, has the advantage, inasmuch as the minutiæ are more exactly detailed by it. But we do not wish to depreciate in any way the method of M. Jumelin, whose pieces certainly display great excellence.

We may add that the Museum is open every day to foreign visitors, who may count upon receiving the usual courtesy which characterises the members of the profession in France.

ROYAL COLLEGE OF SURGEONS.

FROM the Annual Report of this institution, about to be submitted to the members in the forthcoming Calendar, it appears that during the past collegiate year, ending July last, the Board of Examiners in Anatomy and Physiology, which consists of nine members, annually elected by the Council from the Fellows of the College, have had four meetings for the primary examination for the Fellowship, and thirty-three for the Membership. For the first named distinction there were 95 candidates, 46 of whom passed, and 49 were rejected for six months. At the Pass Examination there were 35 candidates, of whom 27 were successful, and 8 were referred for one year.

At the Primary Membership there were 747 candidates, 478 of whom passed, and 269 were referred for three months. At the Pass Examination for the same distinction there were 531 candidates; 321 passed, 89 were approved in Surgery, and, when qualified in Medicine, will be admitted members of the College; 72, who were also approved in Surgery, were subsequently admitted members, 121 were referred for six months, and 393 diplomas were granted.

The Board of Examiners in Dental Surgery, which consists of six members, elected by the Council for five years—viz., three members of the Court of Examiners of the College, and three other persons skilled in Dental Surgery,—had examined 39 candidates, 27 of whom passed to the satisfaction of the Board.

The Board of Examiners in Midwifery, as is now well known, has ceased to exist; in fact, there have not been any appointments made during the last three years, and consequently the examinations are suspended until further notice.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 28, 1878.

THE obligation to control impulses, whether of passion or emotion, rests upon all sane—and on the majority of insane—persons. Civilised society could not exist without the recognition of this initial and universal duty, and there must be a fundamental agreement that its performance shall be enforced. In so far as science seeks to claim exemption from this rule for members of the community who are not generally known and felt to be absolved from responsibility by pronounced mental disease, it must expect to encounter strong opposition on the part of those who are the guardians of the public safety. If *after* a man has committed some hideous crime by which the peace of Her Majesty's subjects is endangered, or even life sacrificed, a subtle contention that the power of self-control has been weakened by disease, supported by the slenderest evidence, is to be admitted, the safeguards of society will be so reduced that the fundamental compact will be broken, and the individual must look to his own preservation. Those who are perpetually enlarging the circle of insanity, and striving to include offenders of all classes within the area of its protection, do not perceive to what their work tends. The line must be drawn somewhere, and we confess to greater sympathy with those who maintain the existence of legal responsibility in the case of all who are not absolutely unsound, than with the advanced psychologists who contend that wherever and whenever mental disorder and disease can be detected, in however small degree, the subject must needs be absolved from every obligation. The logical issue of this reasoning would be to destroy not merely the bonds which hold society together, but the foundation on which it rests—namely, an undertaking on the part of the State to protect the persons and property of its members from all the malice and greed of those around them, not less than the assault of open enemies from without.

It is on many accounts desirable that this subject should be discussed from time to time, until its medico-legal bearings are more generally understood. The present position of the question is most unsatisfactory, and the complexion it is apt to assume in special cases is at once alarming and discreditable. It is well that the controversy should be carried on apart from personal considerations of all kinds, and we therefore purposely avoid particular reference to the recent instances which have recalled the subject to the public mind.

Self-control is the first duty of every rational being, and its neglect is the least pardonable of offences. The degree in which it is commonly exercised must depend on original intelligence, education (using that term in its broadest signification), and habit. The laws of society enforcing men and women to govern themselves and hold their passions in restraint, will necessarily be framed with regard to the minimum of intelligence rather than the maximum, so as to take in all classes of the community; and the code of an unrefined people must therefore be more simple and less exacting than that of a cultivated nation. Meanwhile all alike condemn offences which are directed against life and real property, and it is with these we are mainly concerned. Setting aside the class of obviously insane persons, who are legally recognised as incapable of governing their conduct, it is impossible to admit the plea of irresponsibility as an excuse for crimes committed by those who enjoy the advantages of public protection while they claim and exercise social rights. Even the insane are capable of a large amount of self-control, and it is chiefly by encouraging the exercise of this function, and redeveloping the faculty, their maladies are cured or relieved. It would be a grievous misfortune to the best interests of society if, in the sentimental effort to include all we commiserate under the excuse of insanity, the sense of duty in this matter should be overpowered.

The only difficulty that arises relates to the case of persons who suddenly become insane and commit some crime at the moment of outbreak. The number of these cases is exceedingly small, and they should be most jealously investigated. It is a matter of extreme doubt whether, except when the intellect is disorganised by a great calamity, insanity sets in without certain premonitory symptoms. If these have been observed and neglected, those around the insane person ought to be held responsible. An Act of Parliament charging the public with the obligation to place lunatics under proper protection would be advantageous, and possible abuses might be avoided by obvious provisions. The number of really "sudden" cases is probably very small and much exaggerated. Far more common is the evil for which it is our immediate purpose to ask attention. Men and women habitually neglect the duty of self-control. They allow passion and what, for want of a more appropriate term, we call "temper" to get the better of them. Ebullitions of anger and outpourings of spite are permitted, and when, in some moment of special provocation or weakness, they perpetrate an enormous crime, forsooth they must be called "insane"! This is the true history of many a maniacal paroxysm culminating in murder. It is "madness," not madness, under which the criminal labours. He was sane before, and is sane after, unless the violence of the paroxysm, or the bitterness of remorse, has really disorganised his intellect. Can Science honestly throw her protection over such an offender? If she does, it must clearly be at the cost of encouraging the neglect of self-control.

To drop the reins on the neck of desire, or give way to impulse, is in itself a crime against the peace of society, and in a state of civilisation higher than that to which we have attained, it would probably be visited with severe pains and penalties. If the seducer should ever meet his due reward, we shall have taken one step on the road of ameliorative and intelligent reform. The next may be to chastise the wife-beater, and, in the end, excess of all kinds which springs from the neglect of restraint will be punished as it deserves. Meanwhile, until society is prepared to repress passion of every description, it would not be just, and should not be asked, to excuse the offence, or mitigate the penalty of murder or bodily injury committed in a paroxysm of anger, or under impulse which the perpetrator has failed to control. Whether a man gives way to rage habitually until fury

becomes his master, or enfeebles his intellect with drink, until, under its influence, or in the state of morbid excitement induced by drink, he yields himself to vile or violent impulses, he should be held strictly accountable, and punished as the law directs. If the penalty be death, and society in its mature judgment determines to maintain that form of retribution, he should die. Nothing but confusion, and a great and grave weakening of the influence which deters men from the commission of offences, can result from the existence of a loophole by which the criminal may escape. It is not unreasonable to hazard a conjecture that, if insanity is really on the increase in this country, it may be partly traceable to the recognition of "irresponsibility," in an increasingly wide form. The practice of excusing offences committed under impulse on the ground of mental disease has certainly led to the assumption that much that is really bad temper may be the fruit of disease, and this hypothesis has been readily seized upon by constitutionally irritable persons, and wrested to their own injury. The habitual neglect of self-control in regard to passion and impulse of all kinds is one of the short roads to insanity, and if criminals are to be excused on the score of insanity, in the future as they have been in the past, we venture to predict that insanity will increase, if it has not already done so, especially among the classes which are the most provoked by circumstances, and exercise the least self-restraint. It is time these excuses on the ground of drink and its effects, impulse, and excitement should be abandoned by a sentimental philanthropy, which has already done much to loosen the bands of social order. It would be in the last degree disastrous and humiliating if scientific subtlety should be pressed into the service of this pretended humanity and the figment of irresponsibility erected into a serious proposition which the law was compelled to admit.

AN explanation of the mode in which the absorption of fatty substances is effected from the alimentary canal has always been a subject of considerable difficulty both to the physicist and to the physiologist. Formerly the only preparation to which the oleaginous constituents of our food were supposed to be subjected was their liquefaction and minute subdivision, effected partly by the warmth and partly by the triturating movements of the stomach. An important step in advance was made by WISTINGHAUSEN, when he observed that oily substances rose higher in capillary tubes which had previously been moistened with an alkaline fluid than when pure, and applied this observation in explanation of the influence of the bile on the absorption of oily substances, noticing further that such oily fluids could be more readily pressed through membranes moistened with a solution of the biliary salts than under their ordinary condition.

Still more recently E. v. BRUECKE has shown that the formation of an emulsion, when oil is mingled with dilute albumen, with fresh ox-gall still containing mucus, or with a dilute solution of borax or sodium carbonate, is much more easily and completely effected if, instead of being perfectly pure, the oil is slightly rancid—that is to say, has undergone partial decomposition into the fatty acids. Pure and neutral oil, he remarked, shaken up with either of these fluids forms proportionately large drops, which quickly re-unite, but if they be mingled with the fatty acids, a white and permanent milk is at once formed. BRUECKE further demonstrated that sodium carbonate has little action in emulsifying fats if free acids be present; they combine with a part of the soda to form a soap, and the emulsification is then easily effected. The same thing can be shown in another way by adding a small quantity of a solution of soap to pure oil, when a persistent emulsion can be quickly made. An interesting paper has just been published by J. GAD in HIS and BRAUNE'S *Archiv für Anatomie*, in which he gives the results of his observation on this point, and essentially confirms BRUECKE'S statements. He points out that the mere contact of rancid oil with an alkaline solution is attended by violent commotion at the time of junction of the two fluids, which leads to the spontaneous formation of an emulsion without any mechanical agitation being resorted to. If a drop of oil be thus placed in contact with an alkaline solution it soon begins to exhibit amœboid movements, sending out processes which, after giving off a white milk from their borders, are again drawn in, some small droplets often remaining detached, the original drop after a time resuming its original circular form. If the separated droplets be isolated in another fresh portion of the soapy fluid no new movements are observed. The experiments prove that fats only form a good emulsion so long as they contain free fatty acids, and these become exhausted in the emulsifying process. The oils experimented on by GAD, all of which have yielded similar results, have been olive, almond, castor, neat's-foot, and liver. He finds that the emulsifying capacity of the several oils with a given fluid differs in accordance with the degree of their acidity, with the solubility of the soap formed in the fluid, and with the viscidity of the fat; whilst the emulsifying power of the same oil with different fluids depends partly on the grade of alkalescence of this fluid, and partly on its power of dissolving the soaps that are formed. The excellence and completeness of the emulsion occur under those conditions in which the formation of membranes can be just no longer discerned, for under conditions which are favourable to the solution of the soaps that are formed no emulsification occurs at all, whilst under those that are favourable to the formation of firm membrane the resulting emulsion is less perfect, and is rendered impure by the presence of particles of soap. Common salt and bile, he finds, supply conditions that favour emulsification, and correct opposing influences.

If we attempt to apply some of these observations to physiology, it will be seen that, when fats and oils are taken into the stomach, the warmth and moisture to which they are there subject are conditions favourable to the occurrence, in some degree, of decomposition and slight acidification—a fact that is supported by the statement occasionally advanced that the acid of the gastric juice is butyric acid. The high acidity of the fluids secreted by the stomach, however, prevents emulsification taking place to any great extent in this cavity. This acidity is corrected by the alkaline salts of the bile; and thenceforward, in their passage through the alimentary canal, the minutely subdivided fats and oils are continually exposed to fresh quantities of alkaline fluids, by which their emulsification is effected and maintained.

Seeing, then, that a slightly acid condition of fats is a preliminary condition to their absorption, the question put by BRUECKE, Why do we not consume fats in a rancid condition? is a very pertinent one; and the reply given by GAD is, first, that cod-liver oil, which, though certainly not taken *con gusto* by most people, yet is not, after a time, distasteful, and undoubtedly possesses highly nutritive properties, has a well-marked acid reaction. Secondly, that fats the acids of which form soaps that are soluble with difficulty, like those in ordinary use, give the best emulsions when only very feebly acidified. Thirdly, that, urged by a natural impulse, we consume fat almost always in combination with more or less common salt, which promotes the emulsification of feebly acid oil when mingled with dilute solution of soda. Lastly, it may be observed that that part of the canal into which the pancreatic fluid which BRUECKE has shown to possess so powerful an influence in disintegrating fats is specially favourable to the act of their emulsification, the fatty acids that are thus formed combining with the alkaline fluids poured forth by the intestine, and greatly aiding the process.

IT does not become us to overlook the great work of popular education set in motion by the recent Government, and generously continued and confirmed by the existing one. Accordingly we have made it our business to glance at the Reports of the Committee of the Council on Education for 1877–78, in England and Scotland respectively. And, on the whole, the Reports are satisfactory. There are very many children still not brought under school influences in both countries. But the number of these is diminishing; the school accommodation is increasing; the amount of voluntary subscriptions in support of education increased in England last year, as compared with the previous one, from £751,800 to £786,245, in Scotland from £39,756 to £40,315; the contributions from rates to the maintenance of Board schools advanced in England from £369,918 to £447,710, in Scotland from £167,358 to £205,603; school pence rose in England from £1,034,408 to £1,138,270, in Scotland from £206,012 to £225,802. The annual Government grants to elementary schools in England rose in the year from £1,316,863 to £1,543,225, or from 13*s.* 3½*d.* to 14*s.* 4½*d.* per scholar in average attendance; in Scotland from £234,935 to £282,643, or from 14*s.* 3½*d.* to 15*s.* 8½*d.* per scholar in average attendance. Thus in England the work of elementary education is costing a sum of £3,915,450, and in Scotland £754,363—in the two countries a sum of at least £4,669,813. The extent to which education is becoming national in character, as distinguished from denominational, is strikingly shown by the Scotch Report, from which it appears that, whereas in 1872 there were 1902 denominational schools, there are now but 671, the Established Church and the Free Church alike having extensively transferred their schools to the School Boards of the districts.

Meanwhile schools may be costly and undenominational, and may be attended by an increasing number of children, and yet may be very ineffective. It is evident that, for good or for evil, the future of the country is in the hands very largely of the schoolmasters. Is it for good or for evil? Are the results proportionate to the outlay? Is the game worth the candle? That is the question. And it does not behove the medical profession to be indifferent to the answer, or to refuse its suggestions in furtherance of such a kind of education as will repay the nation for its large contributions. It must be confessed that the results as yet are not very satisfactory. Even if the education given were so, a large proportion of the children of the country have not yet found their way to the schools; a large number of those who have done so do not attend with anything approaching regularity; and finally, and most seriously, the nature of the results attained by many of the scholars who are submitted by the teachers for examination is meagre, of those above ten years old not more than *40 per cent.* being presented in standards appropriate to their age. The results of the examinations were much better in Scotland than in England. Thus (the Scotch results are those in brackets), of every 100 scholars examined, 85 [93] passed in reading, 78 [88] in writing, 69 [80] in arithmetic. Still it is satisfactory to find that in almost every respect progress, however slow, is being made.

The reports make allusion to the question of the health of pupil teachers. The Lords of the Department say that, in consequence of the expression of doubt as to the ability of pupil teachers to bear the strain of from three to five hours a day in school-keeping and teaching, in addition to the work implied in their course of study, they obtained from the medical officers of training colleges a return as to the health of the candidates for Queen's scholarships, and obtained, on the whole, satisfactory information.

The Reports are conspicuously wanting in any returns as to the health of the children, and as to the tendency of congregating such large masses of children to spread infectious disease. It is extremely desirable that the Committee on Education should take some thought on this subject, and give us returns upon it in each annual report. The State cannot with propriety compulsorily collect such masses of children together at the most susceptible periods of life, from five to thirteen years, without incurring a great responsibility to do everything to protect them from disease, arising either from general insanitary conditions or from exposure to special infection. It would be but right that the Committee of Council should enjoin on School Boards the appointment of a medical officer to report from time to time on the general health of the scholars, and especially on the occurrence of cases of infectious diseases, and the steps taken to protect other children. We gladly admit the care with which playgrounds and other sanitary provisions have been made, but we are still ignorant of the health of the Board schools, and of the extent to which they become the means of conveying disease.

THE Local Government Board has within the last few days committed itself to an opinion and line of action upon an important question of sanitary practice which, it might be presumed, under ordinary circumstances, would have affected hygienists much after the fashion of an explosion of a Whitehead torpedo. With Machiavellian astuteness, however, the Board has exploded its hygienic torpedo during the vacation, when the active movers in public health matters are scattered east, west, north, and south, and when all reasonable beings who can relieve themselves for the moment of current cares are

promiscuously seeking personal health and relaxation in the delightful places of the earth. But often it happens that the rebound of an explosion is more disastrous than the outward push; and it may be that when irate hygienists come together at the close of the vacation we shall witness the effects of the rebound.

The facts of the case, as given in local journals, are as follows. The Local Board of Idle, a town in the West Riding, adjacent to Bradford, applied in the course of last year to the Local Government Board for permission to include in their bye-laws relating to new buildings certain clauses for regulating the construction and arrangement of back-to-back houses. The Local Board rested this application mainly on the alleged impracticability of erecting buildings in its district, except on this plan of construction, which could be let at a rental that would meet the needs of the class of population earning the lowest wages. The Local Government Board, according to the *Bradford Observer*, accepting this allegation, "*conceded the principle of back-to-back houses* under exceptional circumstances such as had been put before them by the Idle Local Board." Previous, however, to expressing an opinion upon the particular scheme for regulating the construction and arrangement of houses of this class submitted by that Board, the Local Government Board directed an inquiry to be made into the actual working of back-to-back house arrangements of the sort suggested by the Idle Local Board. The gentlemen engaged in this inquiry were Mr. NETTEN RADCLIFFE, of the Medical Department of the Local Government Board, and Mr. P. GORDON SMITH, the architect to the Board. For the purposes of the inquiry these gentlemen visited several towns of the West Riding where the building of back-to-back houses is still in vogue, and where under Local Acts of Parliament bye-laws are in force regulating the construction of these houses, with a view of obviating their unwholesomeness. The report of this inquiry was recently laid before the Idle Local Board, together with the approval of the Local Government Board of the adoption by the Local Board of certain bye-laws as to back-to-back houses which had been agreed upon in conference between that Board and the gentlemen officially engaged in the inquiry referred to.

That the Local Government Board should, under any circumstances whatever, "concede the principle of back-to-back houses,"—a principle utterly subversive of sanitary teachings and experience regarding house-construction—must strike hygienists with dismay. There is a common accord among sanitary workers as to the indefensibility of back-to-back houses, and the belief is very generally entertained that the recognition of this indefensibility by local authorities is simply a question of time. Certainly there is not wanting evidence that this truth has of late years made much way in the very localities where back-to-back house building is most followed. It is true that Parliament has assented to Local Acts which accept back-to-back houses as a necessity, and that the Local Government Board might plead this bad example; but it is perfectly well-known that Local Acts which thus contravene sound sanitary principles pander to local politics, rather than meet local wants. But that the central sanitary authority—the Local Government Board—the authority which has the supervision of the sanitary laws, and to whom we must look for the support of sound sanitary principles and practice as against local prejudices and errors, should follow in the wake of Acts of Parliament such as those we have referred to is well-nigh incredible. Hardly less credible is the fact that this grave action should have leaked out, so to speak, only through the columns of local journals in the form of brief reports of the proceedings of the Idle Local Board, and of a not less brief abstract of the official report of the inquiry. In other words, there are no means of judging of the grounds upon which the Local Government Board has taken this momentous step, except the records in the local journals. Thus, the mischievousness of the decision come to by the Local Government Board is left almost wholly uncontrolled by the qualifications attached to it. Above all things it was necessary, if harm was to be avoided, that a decision subverting a fundamental doctrine of sanitary practice should have been given to the public, or made accessible to it, in a way that would not admit of misapprehension. Precisely an opposite course has been followed in this case, and we cannot learn that the Board contemplates publishing even the report of its officers.

We may admit a certain fitness in selecting Mr. NETTEN RADCLIFFE as one of the inquirers concerning the working of local building regulations as to back-to-back houses. The gentleman who discovered previously unsuspected virtues and capabilities in the common privy, and glorified it, was clearly the proper person to employ upon an investigation as to the virtues and capabilities of back-to-back houses, the Local Government Board having conceded the necessity for their existence. We are not surprised, therefore, to find in the abstracts of the report before us a suspicious smack of the line of argument by which Mr. RADCLIFFE succeeded in elevating the common privy again to a dignity which it had not held since the days of ancient Rome, when it was, in fact, the altar of a particular and most respected deity. We read, in fact, that the Reporters "felt bound to admit that the sanitary construction (of the back-to-back houses built under defined regulations) differed *very* considerably from what they expected to find." In other words, as we infer from the context, they found these newer back-to-back houses in no respect comparable to the older back-to-back houses as regards their sanitary capabilities, but, on the contrary, found them good, habitable, and presumably wholesome dwellings.

We are not prepared to say that this astounding conclusion, as also the conclusion of the Local Government Board with regard to the necessity for back-to-back houses, may not be supported by the evidence in the possession of the Board and its officers. But we do say that conclusions so contrary to general belief and to accepted sanitary teachings ought not to have come before the public, unless accompanied by the evidence upon which they were founded, or, at least, unless the official report which appears to play so important a part in them were generally accessible.

AT a meeting of the Board of the Ledwich School of Medicine, Dublin, held on the 20th inst., Mr. J. E. Kelly was elected without opposition a lecturer on Surgery in the vacancy caused by the resignation of Mr. John K. Barton.

Annotations.

"Ne quid nimis."

THE TROOPS IN CYPRUS.

THE accounts received from Cyprus are still very meagre, but they are not more satisfactory as regards the health of the troops. Some rain has fallen, and the excessive heat has in some degree abated, but as yet without any apparent effect on the prevalence of fever, except at Larnaca, where it is stated to be decreasing rapidly. Any great change, however, could scarcely have been expected yet. The men are still suffering from the effects of solar exposure, and some time must elapse before the influence of the reduced temperature is felt. We observe that the first instalment of huts for the troops has at last arrived, and is to be given over to the Royal Engineers and 71st Regiment. We trust the remainder of the huts may not be far off, as one of the most likely means to improve the health of the men will be to house them comfortably in a well-selected station. The information which has as yet come to hand does not enable us to say whether the necessary attention has been paid to the sanitary arrangements, so far as these can be carried out with the means at hand in the island, but we trust that the authorities may be able to show that this important matter has not been overlooked, and that the recommendations of the medical officers have not, as on too many former occasions, been systematically ignored.

URBAN AND RURAL FATALITY OF ENTERIC FEVER.

IN a paper recently published in these columns, Dr. Thursfield called attention to the fact that in England and Wales the local fatality of diphtheria occurs inversely to that of enteric or typhoid fever; in other words, that, while diphtheria is most fatal in rural districts, urban districts suffer most from enteric fever. Dr. Russell, of Glasgow, who has devoted much attention to the incidence of these two diseases in Scotland, came to the same conclusion as Dr. Thursfield with regard to the greater fatality of diphtheria in rural districts; but, with respect to enteric fever, he asserts that this disease, like diphtheria, is more fatal in rural than in urban populations. It is of course possible that, whereas enteric fever is essentially an urban disease in England, the reverse may be the case in Scotland. It would be easy, however, to supplement Dr. Thursfield's figures, which are in the main trustworthy, with others corroborative of the undoubted fact that in England and Wales enteric fever is far more fatal in urban than in rural populations. There are one or two reasons why Dr. Thursfield's figures somewhat understate his case. In the first place, enteric fever shows a still greater fatality in small new urban aggregations in mining and manufacturing districts than in the largest English towns; and in the second place, Dr. Thursfield has somewhat overstated the fever-rate in his ten rural counties by having taken their populations as stationary since 1871, which they undoubtedly have not been. There is one point in Dr. Russell's attack upon Dr. Thursfield's figures which is worth noticing. He urges that the figures for the Registrar-General's "fever" (including typhus, enteric or typhoid, and simple continued fevers) cannot be accepted as a basis for the calculation of the relative fatality of *enteric fever* in different populations. Now it is true that the deaths from enteric fever in large towns bear a smaller proportion to the total deaths from fever than they do in rural districts. This is owing to the fact that typhus is almost exclusively an urban disease. Taking the year 1876, however, as an example, being the most recent for which the Registrar-General has published his detailed annual report, we find that the death-rate referred to enteric fever averaged 31·1 per 100,000 persons living in England and Wales, 29·3 in the registration districts containing the twenty largest towns, and only 22·1 in the second, third, fourth, and fifth registration divisions, the population of which is mainly rural. One or two useful conclusions may be drawn from these figures. As the death-rate from enteric fever in the twenty large towns is below the average rate in the whole of England and Wales, and as the rate in four mainly rural divisions is very considerably lower still, it follows that the death-rate from this disease must show a marked excess in the urban population living in the smaller towns. It should also be borne in mind that, if it were possible to exclude from calculation all the urban population in these four mainly rural divisions, the comparative immunity from enteric fever enjoyed by purely rural English populations would be still more conspicuous. Although not so exclusively as typhus, enteric fever is in England an essentially urban disease, and we doubt very much whether an opposite conclusion can safely be drawn from Dr. Russell's own figures for Scotland.

ANGLO-INDIAN AFFAIRS.

THOSE of our readers who take any interest in Indian affairs will remember the trial and eventual deposition of the Guikwar of Baroda, on a charge of attempting, three years ago, to poison Colonel Phayre, the British Resident. One of the immediate results was the appointment of Sir T. Madden Row, K.C.S.I., as Minister of the British Government, who, among other reforms, initiated a regular medical service in the State, modelled on that in the surrounding British territory. Dr. T. Cody has had entire charge of the scheme under the title of Durbar Physician and Chief Medical Officer, his services having been lent to the Government for five years for the purpose of developing and completing the system. Two years have now elapsed since the work commenced, and twenty hospitals and dispensaries are already opened, the daily attendance of sick at which is somewhat over 1300 persons. The yearly grant for the work is £15,000, besides a large sum allotted for building purposes. One hospital is already built at the capital for the use of the State troops, which will accommodate eighty inmates, as well as a hospital and dispensary for the civil population. Vaccination is progressing, and 10,000 persons have been operated upon during the current year. A special scheme of water-supply is also elaborated for the city, as well as one of conservancy for the other chief towns in the State. The area of the Durbar of Baroda is 4399 square miles, with a population of 2,000,225 souls, and a gross revenue of about a million and a quarter sterling. Under the rule of the Guikwars, native hakims only were employed, but the Minister has pensioned off all these officers, and only Europeans are now appointed to responsible positions.

THE CONTAGIOUS DISEASES ACTS.

A VERY short Parliamentary paper has recently been published at the instance of Mr. Stansfeld, containing a copy of the replies of the Rev. E. P. Grant, vicar of Portsmouth, to the questions addressed by Convocation to the clergy, as to the operation of these Acts. The questions and replies published are but fourteen in number, and their tenour must have greatly disappointed the right honourable gentleman who asked for them. According to the witness the Acts have been most beneficial in diminishing prostitution: for in 1856 there were 789, and at the end of December, 1876, 476 prostitutes on the register at Portsmouth; the brothels in 1865 being 263, and in 1876, 133 in number. Question 6 drew the reply that the number of private houses, as distinct from brothels, in which prostitutes lodge or are received,

has diminished from 160 in 1865 to 115 in 1876, and there are now only nine indiscriminate houses. As regards men, Mr. Grant believes that they are in a much better state of health (soldiers and sailors are specified), and, therefore, not only less expensive to the country, but able to do their work better than before. As regards loose women, in addition to the diminution in their numbers, they are, according to the vicar, more orderly in their conduct, and "no such instances of extreme degradation as formerly existed are now brought before the magistrate's notice." As to the deterrent effects of the Acts, in 1874 there was only one at fourteen years of age on the register (whereas girls of twelve were sometimes formerly found there), in 1875 only one again at fourteen, at the end of December none under sixteen, and only two at sixteen and seventeen years of age. As to the population generally, "less immorality, less disease, and, consequently, less infliction of a most hateful curse upon an undeserving population." In proof of this it appears that 7·30 is the percentage of disease existing among women already on the register, whereas it is 26·58 per cent. among those newly registered, and is actually as high as 74 per cent. if the calculation be made of those who come from unprotected districts. Mr. Grant considers that the repeal of the Acts would cause to Portsmouth a sure and sudden relapse "to that fearfully sad state of immorality from which it (Portsmouth) has for the last ten years been slowly but most perceptibly emerging."

Surely evidence from such a quarter must appeal forcibly to the common sense of Sir Harcourt Johnstone and his ill-advised supporters. Mr. Stansfeld could not have done a better thing at the end of July and at the close of the session than ask for this brief but telling record of barely three pages, which is worth reams of the inflammable material that has from time to time been produced on the same subject, much of which was maudlin in sentiment and disgusting in detail.

THE SANITARY STATE OF THE RUSSIAN ARMY.

THE *Journal de St. Petersbourg* of the 24th August gives the following information as to sickness in the Russian army, on the authority of a telegram from San Stefano to the *Voice*. The forces to the south of the Balkans had 13,784 sick; the forces to the north 2481; the forces in reserve 4411; making a total of 20,676. Of this number 2643 had been sent to South Russia, leaving 18,033 with the troops in the field. From the month of April to the month of July 10,461 sick had been sent to South Russia by way of the Danube.

As early as the beginning of August it had been found practicable to diminish the military hospitals and the ambulances of the Red Cross Society by one half, and to dispense with the greater portion of the females who had volunteered their assistance in the hospitals and ambulances. Some anxiety was felt respecting that section of those volunteers who were not connected with any of the regularly organised sisterhoods, and great efforts were being made by the Red Cross Society to provide homes and resources for such as might need them on their return to Russia. The Empress has issued a general address to the Red Cross Society, thanking them in the warmest terms for the help given to the army during the war.

The means of precaution taken to prevent the introduction of infectious sickness into Russia by the troops returning from the seat of war are not confined to the sick from infectious diseases, but are extended also to the clothing of the healthy. The first detachment of troops from the south of the Balkans landed at Sebastopol consisted of four infantry regiments. These, in the first instance, were encamped outside the city at some distance, and their clothes were subjected to a process of disinfection under the supervision of a special military commission. Two methods of disinfection were practised—one, very simple, by ignited sulphur, the other more complicated. On the Lozow-Sebastopol Railway six closed luggage-waggons were stationed. These waggons were padded inside with felt, and all the apertures made to close tightly. In these waggons were suspended the clothes of the soldiers, company by company; then in each waggon were ignited four disinfecting cartouches of the sort invented by the academician Trapp, and the doors carefully closed. After an interval of forty-five minutes, steam from a locomotive engine was poured into the waggon by means of a copper-tube, with valve, fitted in the floor, and the temperature of the anterior of the waggon raised to 125° R. The waggon remained closed for twenty-five minutes after this operation, and then the clothes were withdrawn.

THE MEDICAL CONGRESS AT PISA.

THE "National Association of Parochial Practitioners," and the "Italian Medical Association," which, by a wise arrangement, hold their periodical congresses simultaneously, met at Pisa on the 22nd in the Great Hall of the University. There was a large attendance—upwards of five hundred—including many of the first names in Italian medicine. France, Germany, and England were also represented on the occasion. Opening addresses were delivered on the part of the Medical Association by Professor C. Minati, of Pisa, and on behalf of the Association of Parochial Practitioners by Dr. Achille Ballori. These, which were each applauded heartily, were followed by speeches from Dr. Ratti, of Rome; Dr. Castiglioni, the Rector of the University; the Syndic, and the Prefect—the three last-named pledging themselves to spare no effort to uphold the renown of Pisa as a genial and time-honoured abode of science.

The business of the Congress begins on Monday, and concludes on Saturday. The papers announced for discussion are numerous, and several of them on highly important questions in surgery and medicine. One of the most interesting features of the Congress is its Medical Exposition, which has been organised with much care, and which represents the most recent accessions to the resources of the healing art.

THE BURY UNION INFECTIOUS DISEASE HOSPITAL.

THE Bury Union has recently opened a hospital for infectious diseases in connexion with the workhouse, the plans for which are described by the responsible officers of the Local Government Board as "excellent in themselves, and greatly in advance of anything of the kind hitherto attempted." The architect who has designed the plans upon which this exceptional praise has been bestowed is Mr. L. Booth, of Manchester, and, so far as we can judge from a written description, they well deserve it. The hospital is placed on a site which is situated between the workhouse buildings and the cemetery, and is very open on three sides. The patients will be accommodated in four several and distinct blocks, each one of which is fitted up complete in itself as a separate hospital. The only connexion between the blocks is a wide handsome covered way, open at the sides, supported by ornamental iron columns, and covered by a wide projecting roof, affording sufficient protection in all sorts of weather. By this arrangement any one block can be used for a distinct kind of fever, and for either sex, without interfering with the proper and safe use of the other departments in any way. Each ward contains eight beds, and there is provided in connexion with it a spacious and cheerful day-room for the convalescent patients. There is a kitchen, nurses' room, linen-closet, bath-room, lavatory, store-room, larder, water-

closet, sink for ward slops, and store for patients' clothing in every block. The wards are built on the pavilion principle, one storey in height, with windows on two sides and opposite to each other. The windows are made to open to their fullest extent, and there are "hit-and-miss" girds on a level with the floor, also hoppers for ventilation over the head of each window, and convex ventilating-shafts from the ceilings. The wards and day-rooms are warmed with Shillets and Shorland's "school-grates," which in their action are intended to keep up a copious supply of warm fresh air in every part of the room. The kitchens are supplied with proper hospital cooking-ranges, having gas hobs for occasional use. In addition to the hospital buildings there is a detached residence for the matron, and one for the porter. The building, substantially constructed, is faced entirely with stone, the walls of the wards within covered with Parian cement to a height from the floor of 4 ft. 6 in., the remaining portion being plastered, and the kitchens, passages, store-rooms, &c., have tiled floors.

INCREASE OF RECORDED LUNACY IN ENGLAND AND WALES.

THE thirty-second report of the Lunacy Commissioners contains a table showing the ratio of lunatics, idiots, and persons of unsound mind to the population, in each of the twenty years 1859–78. It appears that the ratio of all persons recorded to be of unsound mind to 10,000 persons living has increased during this period from 18·67 in 1859, to 27·57 in 1878. Measured in this way, the increase of lunacy has been equal to 48 per cent. during the twenty years. The gravest difficulty, however, stands in the way of determining how much, if any, of this increase is really due to the increase of lunacy, and how much to the more liberal interpretation of the term "lunacy" in recent years. It may be noted that the increase of private lunacy in the twenty years did not exceed 24 per cent., while that of pauper lunacy was equal to 52 per cent. With the recent steady decline of pauperism in England and Wales, the proportion of pauper lunatics to total paupers has largely increased. In 1859 only 3·7 per cent. of the total paupers were classed as lunatics, whereas in 1878 this proportion had increased to 8·1 per cent. It should be remembered that the total lunatics and idiots dealt with in the Lunacy Commissioners' report consist of three classes—those in asylums, those in workhouses, and those residing with relatives and others. For instance, on the 1st January last 63 per cent. of the pauper lunatics in England and Wales were in asylums, 27 per cent. in workhouses, and 10 per cent. were residing with relatives and others. After making due allowance for increase of population, the ratio of pauper lunatics in asylums has, during the past twenty years, increased by 69 per cent.; those retained in workhouses have also increased by 62 per cent.; while the decrease of lunatics living with relatives and others did not exceed 15 per cent. Thus the large increase of asylum accommodation in the past twenty years has done little more than keep pace with the large increase of persons returned as insane; and on the 1st of January last no less than 22,479 insane persons were retained in workhouses, or were living with relatives and others. With regard to this large number of insane, however (of whom 4406 were in the Metropolitan District Asylums), it should be borne in mind that they have never been formally certified as lunatics, that their classification as such is completely arbitrary and has no approach to scientific accuracy, and that they are not under the control and superintending care of the Lunacy Commissioners. More knowledge of the actual mental condition of insane paupers not confined in asylums is absolutely necessary to the formation of a sound opinion as to the truth of the asserted large increase of lunacy in England. It is satisfactory to know, however, that the rate of increase of recorded existing cases of lunacy is a declining rate of increase. Dividing the period of twenty years covered by the Lunacy Commissioners' reports into four quinquenniads, we find that, after due allowance for increase of population, the annual rate of increase declined from 2·6 to 2·4 per cent. between the first and second, and the second and third quinquenniads, while between the third and fourth quinquenniads the annual rate of increase fell to 1·6 per cent.

FRIENDLY SOCIETIES MEDICAL ASSOCIATIONS.

AMONGST the questionable new ways of getting medical service on low terms is the device of those Friendly Societies which club together and engage a medical man to attend the members and their families at a fixed yearly salary, with a very inadequate and undignified allowance for each midwifery case. A case in point has just occurred at Scarborough. The salary to be paid is at the rate of £200, together with 5*s.* 3*d.* *(sic)* for every midwifery case attended by him, and "a vaccination fee of 1*s.* charged by the association." These terms may tempt a very young man, who has an uncertain future before him. But there is another term, which should bid even him to pause: "In the event of leaving the service of the Association, he will not be allowed to practise in Scarborough for two years, under a penalty of £200." This is a terrible interference with the right to practise in any part of the Queen's dominions conferred by Act of Parliament, and one of which we take leave to question the legality. The whole complexion of the terms is such as to lead us to advise medical men who respect themselves and their profession not to entertain them. Respectable Friendly Societies should devise more liberal things if they want to be well served.

SANITATION AT TORQUAY.

WANT of space has hitherto prevented any notice of the completion of drainage works at Torquay, which for comparative simplicity and general completeness should, we suppose, bear comparison with any seaside sewerage scheme in the kingdom. The necessity for some reform on this head was seen and publicly acknowledged more than ten years ago, when the local authorities consulted Sir Joseph Bazalgette, and obtained afterwards the advice of Mr. Netten Radcliffe, who was sent down officially by the Local Government Board. Between 1867 and March, 1875, no less than six distinct plans were sketched by Sir Joseph Bazalgette, and one by Mr. John Little. After much discussion, chiefly of a financial character, the work was commenced under the personal superintendence of Mr. George Phillips as resident engineer, and the plan has proved more successful than that usually adopted—viz., having the work performed by contract. The general plan comprises a high level intercepting sewer of about three miles and a half in length, varying in size from 2½ ft. by 1 ft. 8 in. to 7 in. diameter, two miles of which is tunneled through limestone-rock and shale. The inclinations vary from 300 at the upper to 1177 at the lower end of the tunnel. The sewer receives directly at least nine-tenths of the sewage of Torquay. The remainder is pumped into it from the low level district, which comprises about one mile and a half of sewer, varying in size from 9 in. to 3 ft. in diameter, with an inclination of from 1 in 11 to 1 in 500 ft. The practical result is that the waters of Torbay henceforth will, at least should, be quite pure and free from sewage contamination. And in this case we may perhaps join with Sir Joseph Bazalgette in congratulating the inhabitants that they are free from the manipulation of their own sewage "by irrigation, precipitation, or other chemical works, which in so many places are now a source of annual cost, and sometimes

the cause of very serious nuisances." This observation is good for Torquay, but not for all places in the kingdom; and we must remember that the writer is the apologist, as well as the architect, of the metropolitan main-drainage system. This by the way. Meanwhile, the invalids who are thinking to winter at Torquay will read this summary with great satisfaction, and it would be well if other places in Devon, Cornwall, and generally on the south coast, would, by such means, secure their visitors, as well as the residents, from attacks or epidemics of zymotic diseases, so as to be classed by physicians among recommendable watering-places.

EPIDEMIC SCARLET FEVER IN BIRMINGHAM.

SCARLET FEVER has been for some time exceptionally and fatally prevalent in Birmingham, and since the beginning of July the deaths from this disease within the borough have averaged 23 per week. In the first and second quarters of this year the deaths from scarlet fever were 98 and 156, and in the past twelve weeks of the current quarter the fatal cases have further increased to 278. Since the beginning of the year, therefore, 532 deaths from scarlet fever have been registered in Birmingham, equal to an annual rate of 1·91 per 1000 persons living. In the twenty large English towns now dealt with in the Registrar-General's weekly return, the annual death-rate from scarlet fever during the eight years 1870-77 averaged 0·90 per 1000. In Birmingham the average rate from scarlet fever in the same period was 1·01, and ranged from 0·37 in 1871 to 2·06 in 1874. Scarlet fever was continuously and severely epidemic in Birmingham during the three years 1872-3-4. In the three following years the disease was comparatively quiescent, whereas the scarlet fever death-rate of the present year seems to threaten to exceed that which prevailed in 1874. The sanitary authority of the borough, however, now possesses good hospital accommodation for the isolation and treatment of infectious diseases, and it will be discouraging if with this means of controlling the epidemic its fatality should ever equal that of previous epidemics. Judging from the reports of the medical officer of health, the Birmingham Borough Hospital for infectious diseases is at present but little used; in order, however, that such hospitals may answer the purpose for which they are intended much popular prejudice has to be overcome, and above all is it necessary that all cases of infectious disease should be systematically reported to the medical officer of health.

QUARANTINE.

THE Local Government Board have during the past week issued a circular order to all port sanitary authorities in England and Wales calling their attention to the extensive epidemic now raging in America, and urging the immediate provision of hospital accommodation, means of isolation, and generally the completion of preparations that will enable them to co-operate with the Customs in preventing a definite importation of the disease. The authorities at Rio de Janeiro have recently issued a revised code of regulations respecting their own port, which will mitigate in several important respects the inconvenience and miseries formerly experienced by those who had the misfortune to arrive when yellow fever—or, indeed, any other contagious or infectious disease—was epidemic at other ports. The working hours of the crew are limited to from 5 to 10 in the morning and from 4 to 6 in the evening, so that the scorching heat and the dangerous dews are thereby avoided, and the presence of an officer in each lighter sent to the Custom House with goods is dispensed with. These are great boons, and will be appreciated very fully by all concerned.

The Egyptian Government have recently issued a new code of regulations that will affect the pilgrim-carrying trade considerably. One of these indicates that all ships coming from Morocco or any of the ports of Northern Africa will be forbidden to enter any Egyptian port, irrespective of any conditions of the bill of health. But the pilgrims may be transhipped provided the steamer receiving them guarantees to leave the port twenty-four hours after they are on board, and provided also that the transhipment does not exceed three days. This is considered for Egypt as a great concession, for the Egyptian Government are, in all matters relating to quarantine, most despotic, and have not at present in these matters taken any foreigners into their counsels.

THE HOSPITAL SUNDAY FUND AND PROVIDENT DISPENSARIES.

THE study of the awards of the Metropolitan Hospital Sunday Fund, so far as that is possible from the imperfect data given by the Council and the Distribution Committee in their reports, would seem to show that the Committee of Distribution is increasingly disposed to help provident dispensaries by looking on the payments of enrolled members, at least partly, as charitable payments. The amounts apportioned to provident dispensaries have been generally maintained, if not increased, whereas those to strictly free dispensaries have been considerably reduced. We should have to know a great deal more of the work and working of these respective dispensaries before we could express an opinion as to whether the Committee of Distribution is acting well in this respect. Public opinion is certainly in favour of providence as well as charity in the matter of dispensaries. And we are disposed to think that the Committee is acting in accordance with public opinion, more so than with its orginal view of provident payments, which estranged one of the best provident dispensaries of London. By the laws of the Fund it has full discretion in this matter.

LUNACY IN SCOTLAND.

THE twentieth annual report of the Commissioners in Lunacy for Scotland states that on the 1st of January, in the present year (1878), there were under official cognisance in Scotland 9097 persons, of whom 4218 were males, and 4879 females. 7473 were paupers (3396 males and 4077 females), and 1569 private patients (783 males and 786 females). The Royal and district asylums contained 5449, the private asylums 208, the parochial 1092, the lunatic wards of workhouses 644, and 1493 were in private dwellings. The lunatic departments of the general prisons include 55, and the training schools 156. The Commissioners note that "during the three years 1875, 1876, and 1877, the whole increase of registered lunatics was 853, and these consisted of 764 paupers and 89 private patients. During the previous three years (1872, 1873, 1874) the whole increase of registered lunatics was 366, consisting of 290 paupers and 76 private patients." And they add: "These figures show that during the last triennial period the increase was considerably greater than during the three years which went before."

YELLOW FEVER.

THIS calamitous outbreak seems to have almost spent its force, in some places the decline of the epidemic being due to a lowering of atmospheric temperature, and in others, sadly enough, because no more victims remain. A telegram from New Orleans, dated the 23rd inst., records 44 deaths as having occurred in that day, with 134 new cases. This, it appears, raised the list in the city to 7972 cases and 2514 deaths since the commencement of the epidemic. Six deaths only occurred on the 24th at Vicksburg.

It seems that the report as to an outbreak of the disease at Jamaica is not without foundation. The *Standard* reproduces a private telegram announcing that cases have occurred

both at Kingston and Port Royal. These were, however, promptly isolated, so it was hoped no further extension of the disease would occur. The death of Surgeon F. W. Laslett, R.N., of Jamaica Hospital, from yellow fever, is announced by an Admiralty telegram from Commodore the Hon. W. J. Ward.

A correspondent who has seen much of the disease during a long term of service in the Navy, writes:—"From my personal knowledge I think there are two, if not three, different diseases known as yellow fever, but very different in some particulars, notably in contagious virulence. These have been jumbled up by the systematic writer, because they (the varieties) are all marked by yellowness of skin and black vomit, as if one were to confound small-pox with scarlet fever or measles, because all are characterised by skin eruption; and there is the usual fight between contagionists and non-contagionists, as in cholera, when they are treating of totally different things."

We shall take an early opportunity to discuss the various theories respecting yellow fever, when this epidemic can be reckoned among things of the past.

The latest advices, dated the 25th inst., say that on the preceding day 58 deaths had occurred at New Orleans and 3 at Vicksburg, and that there were 64 deaths at Memphis on Monday last.

THE PROVIDENT DISPENSARY MOVEMENT IN BIRMINGHAM.

THE committee appointed at a public meeting for the purpose of establishing self-supporting dispensaries have, in face of much opposition, completed a scheme, which places the management in the hands of the members, while the medical department is under the control of the surgeons, who are five in number. Suitable premises, comprising a consulting-room, dispensary, and waiting-room, have been obtained, and work is to begin on October 1st. The institution has a guarantee fund of £600, but the promoters believe that it will be entirely self-supporting.

A number of medical men on the south side of Birmingham have started an analogous institution, but they propose to keep a greater share in the management, while in the west district there is a strong probability of a third dispensary being started, on the same principle as that in the south district. The provident dispensary movement seems suddenly to have found favour in quarters where it has hitherto met with but few friends or supporters.

FOLKESTONE, one of the most popular watering-places in England, is, according to one of its own local journals, published on the 31st ult., much afflicted with pigs and their habitations, as well as a superabundance of ill-regulated slaughter-houses. A memorial has been presented from several residents and owners of property in the town to the urban sanitary authority, urging that steps may be taken to abolish the nuisance. The same sort of nuisance has occurred at Wandsworth, but has been summarily and promptly dealt with under a summons issued at the instance of the Board of Works for the district. Vested interests are, as a rule, in sanitary matters less tenderly dealt with in metropolitan and suburban than in genuine urban and rural districts.

AT the Guildford meeting of the urban sanitary authority a discussion occurred on the ventilation of sewers, which plainly showed that the members of the Board had very little acquaintance with the elementary principles of drain ventilation. It appears that though stack-pipes are properly enough used in many places to ventilate the Guildford sewers, they are built so low that in some cases the upper ends are on a level with the bedroom windows of the houses against which they are raised. It is thus that a common-sense and very efficient system falls into disrepute, and committees on these occasions, particularly in the provinces, discuss these matters in a fragmentary way, and arrive at no practical conclusion, whereas five minutes' conversation with the engineer or medical officer of health would clear the matter up easily and completely. The same sort of discursive conversation is reported by the *Surrey Advertiser* as having occurred at the Wimbledon Board last week. It appears that in this district, although new drains are made and utilised, some houses still continue to send their refuse into the old sewers, which are interrupted by gully holes, and so cause a serious nuisance. An engineer could have advised the Board how to act in a very short space of time. But here again the committee prefer to spend an hour in discussing a matter of which they are profoundly ignorant, leaving the subject very much as they found it.

IT would appear that more care ought to be exercised in removing invalids from Hong Kong to a more genial climate. Under date of July 28th, it is reported that H.M.S. *Shannon* brought home from Hong Kong Hospital a number of patients specially ordered away by the medical officers for speedy transmission to the more comfortable sick quarters of Yokohama. These patients were suffering chiefly from dysentery, but they, as well as other patients in various ships of the squadron, were kept waiting day after day for a Queen's ship to take them in, although paddle-boats belonging to the Japanese mail service were leaving frequently for the required port of destination. Meanwhile one of the sick officers died. The invalids were eventually sent in H.M.S. *Charybdis*, which was so ill-fitted for the work that she was compelled to put into some out-lying harbour through stress of weather, the unfortunate patients, officers and men, being accommodated in some roughly built, miserable shanties placed under the ship's bridge. The treatment to which these men have been subjected has caused great indignation among the fleet in China.

THE death-rate of London last week was 18·2—a lower rate than has been recorded in any week since the corresponding one of last year. The 1250 deaths included 4 from small-pox, 2 from measles, 24 from scarlet fever, 10 from diphtheria, 43 from whooping-cough, 30 from different forms of fever, and 80 from diarrhœa. These 193 deaths from the seven principal zymotic diseases were 94 below the corrected average number.

THE General Medical Council will meet on Thursday, the 17th of October. The Executive Committee will assemble on the preceding day. Though the Council will probably have but a short sitting, it will doubtless take into consideration its duties, not only under the new Dental Act, but under the unusual circumstances of the question of suspended medical legislation.

THE Honiton Urban Sanitary Authority would appear to be determined to hold out against measures for the improvement of the drainage and water-supply of the town and that in defiance of the Local Government Board. Typhoid fever is reported to have again broken out among the unfortunate community.

PROFESSOR LISTER, F.R.S., has accepted the invitation of the Council of the Midland Medical Society to deliver the opening address of the ensuing session.

CHOLERA has broken out at Indore, and in consequence the 17th Regiment has been removed to Asigairah. Only two cases ended fatally.

The Lancet Analytical Commission.

REPORT
ON THE
FOOD PRODUCTS
EXHIBITED IN THE
FRENCH AND ENGLISH DEPARTMENTS
OF THE
UNIVERSAL EXHIBITION OF PARIS.

No. IV.

WE now pass on to the examination and consideration of the English food exhibits. This collection is of course partial and incomplete, and therefore unlike (as might be expected) that of the French department, which affords a full and entire representation of the food resources of the country. Partial as the English exhibition is, it is nevertheless very interesting, and to foreigners—especially the French people—it must be particularly so, since it affords the opportunity of contrasting the productions of one country with those of another. The English collection contains many articles which are not produced at all in France, and which are entirely novel. This is especially the case with the series of whiskies and gins displayed, these articles not being manufactured in France. The English exhibition differs also from the French in another particular: the French exhibitors have to display their goods in a series of cases of nearly uniform shape, size, and construction, the arrangement being in many instances ill adapted for a suitable display of the articles. But in the English department no such formal arrangement has been adhered to; each exhibitor, having a certain space allotted to him, has been allowed to exercise his own talents and ingenuity in the form and construction of his case, and in the mode of displaying his goods,—the effect being, on the whole, more varied, pleasing, and suitable.

Following the order adopted in the arrangement of the French food collection, we will notice in the first place the several farinaceous products exhibited.

There are no less than four exhibitors of *Oatmeal*, *Pearl-* and *Pot-barley*, and analogous preparations. Of the great nutritive value of these forms of farinaceous food not a doubt can be entertained, and it is desirable that a more general use of them should be made in this country, and that they should more frequently take the place of the nerve-trying tea and coffee, which constitute so constant an element in our morning meal; but, excellent as these preparations are, they are about the last things, however carefully and delicately prepared, that a Frenchman would care to partake of, especially with which to break his fast. He almost universally contents himself with cup of coffee or chocolate, in anticipation of the excellent and abundant meal of several courses which always follows later. The exhibitors of the above-named articles were, we presume, anxious to convince the French of the error of their ways, and convert them to the love of pure Scotch oatmeal. The chief exhibitors under this head are Mr. John Grant, Strathmartin by Dundee; Messrs. Keen, Robinson, and Belleville, of London; Messrs. Mumford and Sons, of London; Mr. James Snodgrass, of Paisley; and Mr. Thos. Wilson, of Glasgow. Mr. Grant exhibits preparations of oats, groats, and pearl-barley, made from grain grown in the valley of Strathmore, one of the best oat and barley growing districts in Scotland. They are doubtless all of excellent quality. The groats are particularly soft and tender, the oatmeal very fragrant of the oats, and the pearl-barley delicate, small, round, and white. The old-established firm, Messrs. Keen, Robinson, and Belleville, also exhibit oatmeal and other similar preparations; it is almost needless to observe that the quality of these several exhibits leaves nothing to be desired.

Messrs. Mumford display oatmeal, prepared groats, and barley, also pearl-peas, peas, and pea-flour. The prepared groats are in a state of fine powder, and intended for the preparation of gruel; the prepared barley is also in powder, and is for the making of barley-water, so useful in a sick-room. The samples of peas are for pease-pudding and pea-soup. These preparations, it is scarcely necessary to say, are all genuine and of superior quality. Messrs. Mumford likewise exhibit samples of spices, which will be noticed elsewhere in this report. Amongst Mr. Snodgrass's preparations are samples of his "celebrated" pea-flour and "improved Scotch oatmeal." Lastly, associated with the name of Mr. Thomas Wilson are samples of an article which he terms "Oatena." We have not had an opportunity of examining this article, but presume that it is a kind of oatmeal.

Messrs. Richards and Co., of Marylebone, display samples of what they term "Self-raising Flour" for making bread and pastry. The name is by no means an inappropriate one; the ingredients with which the flour is mixed on the addition of water occasion an immediate liberation of carbonic acid, the bread and pastry being raised, and so rendered light without the loss of time or the use of yeast. Messrs. Richards' self-raising flour is therefore very useful in those frequent cases where ordinary yeast is either unattainable or is from any cause objectionable. It is well known that many persons cannot partake of leavened, but are compelled to have recourse to unleavened, bread, such as is produced by Richards' self-raising flour, or by means of baking powders.

There are a great many exhibitors of the article the name of which at least must be very familiar to every man, woman, and child in the kingdom—namely, "baking powder." One sees placards of "baking powder" confronting one everywhere. Get into an omnibus, and you see it there; travel by the metropolitan railway, and you see it at all the stations; look at the many hoardings in and about London, and the words "baking powder" stand out boldly before your eyes. Now, what is baking powder? The basis of it is carbonic acid in combination with soda or potash, the carbonic acid being the active and operative element of the powder; but before it can so act it must be set free, or liberated, and this object is effected by placing beside it, mixed in the same powder, a stronger acid, as tartaric acid. But then, since it is desirable that this mixture of alkali and acid should be separated somewhat from each other, and should possess a certain bulk, it is generally mixed with some form of farina. In the dry powder the alkali and soda rest quietly enough side by side, but when the requisite portion of the baking powder is intimately and uniformly mixed with flour, and water is added, the stronger acid seizes upon the alkali, liberating the carbonic acid, which escapes in bubbles, and becomes entangled in the dough or pastry, thus rendering it light and porous. Although this is an outline of the general composition of baking powders, there are many differences in its exact constitution and in the quality of the ingredients of which it is made.

Messrs. Christie and Co., of London, make a speciality of an article which they call the "Royal Baking Powder," and affirm it to be "unrivalled alike in theory of production, and in honest and careful manufacture. Content with a small profit, they are enabled to offer to the public an article which is absolutely effectual, unadulterated, and low priced." Messrs. Glover, Sons, and Co., Bradford, are exhibitors of the "World-famed Baking Powder." This they warrant to be pure, free from any injurious ingredient, and to be of superior excellence. Messrs. Hemingway and Co., also of Bradford, exhibit "Hemingway's Baking Powder," which they state that everyone should use. They also affirm that by its employment a much larger quantity of bread will be obtained from the same weight of flour than by using yeast. This remark is to a certain extent true, and is applicable to all baking powders, the saving being effected thus:—The action of brewer's yeast is chemical; the real agent in making the bread or pastry light being,

as in the case of baking powders, carbonic acid; but this in place of being liberated from the alkali by the action of an acid, results from the decomposition of a portion of the starch, first into sugar, and then into alcohol and carbonic acid.

Mr. John Mackay, of Edinburgh, prepares an article which he calls "Artificial German Yeast Powder." This is prepared with ingredients of good quality, and, being entirely free from starch or farina, is more concentrated and goes further than most baking powders.

Messrs. Parkinson, Bros., of Burnley, display samples of pastry, custard, and egg powders. The ingredients contained in the pastry powder are all warranted pure, and free from alum, which is sometimes used in the adulteration of baking powder, as is also cream of tartar, or bitartrate of potash. These preparations are stated "to be mixed together in the best proportions, raising the paste without excess of any one ingredient to discolour the bread, or give it an unpleasant flavour." Although denominated "Parkinson's Pastry Powder," it is equally adapted for the making of bread and several other articles. The custard powder is a very simple and wholesome preparation, which owes its colour to the presence of a harmless vegetable substance; it is designed for facilitating the preparation of custards, custard pudding, and other similar articles without eggs. Lastly, egg powder has the characteristics of baking-powder, and is used for making pastry and puddings in which the colour of eggs is desired.

The principal exhibitors of biscuits in their various forms are Messrs. P. W. Barr and Co., of Liverpool; Messrs. Huntley and Palmer, of Reading; Mr. R. Middlemass, Edinburgh; Messrs. Peek and Frean, London; Mr. A. Romary, of Tunbridge Wells; and Mr. J. Walker, of Glasgow.

Messrs. Barr, navy biscuit manufacturers, exhibit several different kinds and qualities of sea biscuits. One of these, called "Government bread," is stated to be now largely used by the troops in the South African war; another, "Trade bread," is similarly used for trade purposes on the Coast of Africa. Amongst the sea biscuits are "Plain" and "Extra quality," as also biscuits for the first and second cabins, for passengers and for the crew. Although the quality of these of course differs greatly, they are all sound, sweet, very nutritious, by no means so hard as many sea biscuits are, and all exceedingly well adapted to the several purposes for which they are made. Most of them, even the plainer qualities, can be eaten without difficulty even when unsoaked. Messrs. Barr are also the manufacturers of several useful articles for the feeding of dogs and poultry.

The display of biscuits made by the world-famed house of Messrs. Huntley and Palmer is a very handsome and complete one. It would be impossible to enumerate even the names of all the biscuits shown, but we must confine our brief remarks to a notice of some of the most novel or curious. Among these we will mention the Marie, Maizena, Rural, Albert, and Milk biscuits; "sponge rusks," "Tunbridge wafers," "vanilla-flavoured sugar wafers," "ice creams," "meat wafers," and "raspberry wafers." The "Marie" is a new biscuit, about the same size as the "Albert," but thinner; it is very crisp, rather sweet, and most beautifully made. The "Rural" is a plain, wholesome biscuit, having the form of butterflies, fish, dogs' heads, &c., and is evidently designed for children, both as to its composition and the very pretty shapes it is made to assume. It has occurred to us that a "Noah's ark" biscuit would be an immense success with the juvenile members of the community if the idea were thoroughly well carried out. It will be sufficient to say of the biscuits of these manufacturers that they are not only remarkable for the excellence of their quality, but for the beauty and perfection of their manufacture; the moulds in which some of the biscuits are shaped must be works of art. It has evidently been the prime aim and object of this firm to produce the very best articles which can be manufactured, no matter at what cost of care, time, and money.

The well-known manufacturer, Mr. R. Middlemass, exhibits exclusively "Albert biscuits." For these he has obtained, and justly so, a high reputation; nothing can exceed the care and skill with which they are made; and although the "Albert biscuit" has many imitators, it has no equal.

The show of biscuits of Messrs. Peek, Frean, and Co., also of world-wide reputation, is a very complete one. The construction of their case is peculiar: the central portion revolves, and each description of biscuit is contained in separate glass jars arranged in circles on a stand, which revolves so slowly as to afford ample time for the examination of each biscuit as it passes before the eye. The number of different kinds thus exhibited is very great, but amongst them we noted especially the following: the "Oswego," "Marie," "Milk," "Ginger-nut," "Cocoa-nut," "Wreath," and "Leaflet." The "Oswego" is a delicately made, light, and pleasant-flavoured biscuit, and has doubtless become a favourite with the public. The "Marie" resembles very much the same description of biscuit made by other firms. The "Ginger-nut" is a good old-fashioned biscuit, and the nicest and most wholesome form that has yet been given to gingerbread. The "Cocoa-nut" is a delicious biscuit, and is no doubt a favourite. The "Wreath" biscuit is exceedingly pretty. The "Leaflet" is really of very elegant manufacture; the form and marking of the leaves are so perfect that one can in all cases readily recognise the leaves of which they are such natural representations. All the manufactures of this firm are marked by great taste and excellence of quality and design.

Mr. A. Romary is the exhibitor of his celebrated "Water biscuits." These, like the "Albert," have many imitators, but there are none who have succeeded in making them so well as their original inventor and manufacturer. They are the specialty of the firm, and no doubt the greatest possible pains are bestowed on their preparation. The biscuits contained in the sample we examined were beautifully thin, crisp, smooth, light, and of a most delicate and pleasing flavour.

Amongst the more noticeable of the biscuits exhibited by Mr. Walker are "Tea biscuits," "Groat biscuits," and "Scotch farls," or oatmeal cakes, than which there are few things nicer when partaken of with some really good butter.

We noticed only two exhibitors of *Sugar Confectionery*, the first being Messrs. Allen and Sons, of London. They exhibit several descriptions of lozenges, including peppermint, ginger, and rose; several kinds of boiled sweets, as greengage, pear, and lemon drops; and also what are termed in the trade "pan goods," such as Alexandra and caraway comfits and sugared almonds. We have examined several of the articles exhibited, as also the colours used. We found the different kinds of sugar confectionery to be quite pure, the colours being vegetable, and therefore perfectly harmless.

Messrs. Callard and Bowser, of London, are exhibitors of sweets of quite a different class. "Butter Scotch," "Buttermint," "Vanilla toffee," and "Almond rock," the whole of which are very favourite sweetmeats with the public, and especially with the junior part of it. Messrs. Callard and Bowser have long been manufacturers of these articles, and have acquired a good deal of reputation thereby. These sweets may be placed in the class of really wholesome confectionery, and the samples we examined were found to be pure and carefully prepared.

Mr. Thomas Curr, coffee merchant, of Aberdeen, exhibits a "pure essence of Mocha coffee." From the details we have learnt respecting it, it is evidently very skilfully prepared, one special object of the manufacture being the retention of the refreshing and grateful aroma of the coffee berry. In this object Mr. Curr seems to have been fairly successful, as the sample submitted to us possessed strongly the aromatic odour of the roasted coffee.

Messrs. Dunn and Hewett, of Pentonville, also exhibit an "Essence of Coffee," which they have been in the habit of preparing for many years past. They warrant that it is free from any adulteration whatever, and that it consists only of coffee and sugar. That it is really a very useful article is undoubted, as it furnishes the means for the preparation of a cup of coffee with the least possible trouble, and in the space, as they state, of only one minute. We find the essence to be particularly fragrant of the coffee, and, prepared in the manner directed, it furnished a really very good beverage. But it is as exhibitors of cocoa and its preparations that Messrs. Dunn and Hewett principally shine. Their exhibition is a very complete one, and is, up to a certain point, scientific and educational. They exhibit a model of the cocoa tree, the pod with its berries, the berries themselves, and some of their chief constituents, as particularly the butter or fat of cocoa, and the active principle, theobromine; some botanical and chemical diagrams in illustration of the subject are likewise exhibited. Among the various preparations of cocoa and chocolate displayed are the following:—"Caraccatina," warranted to consist

only of cocoa; "Cocoa powder," also unmixed with either farina or sugar, and warranted to be free from any adulteration whatever; "Spanish Main Cocoa," consisting of a mixture of the finest growths of Spanish cocoa, West Indian arrowroot, and loaf sugar; "Lichen Islandicus," or "Iceland Moss Cocoa," invented by Messrs. Dunn and Hewett; "Maizena Cocoa," a mixture of cocoa, maizena, and sugar; "Soluble Cocoa," the invention of Mr. Daniel Dunn; "Cocoa Paste," recommended for the great facility with which a cup of cocoa can be prepared from it; "Rock Cocoa," which is warranted to consist only of the finest growths of cocoa, and a small proportion of sugar; "Taraxacum Cocoa," "Dunn's Paris Chocolate," and "Fancy Chocolate Creams," &c. The quality of these preparations of course varies considerably, according to the quality and quantity of the cocoa contained in them, and the prices at which they are sold, the superior kinds leaving but little to be desired. The manufacture of these cocoas is very good, and the several kinds are put up with considerable taste.

Other exhibitors of cocoa and chocolate are the well-known Messrs. Fry and Sons, of Bristol. They exhibit in a very handsome case a variety of preparations, of which the following are the more important:—"Cocoa Extract," which consists of the finest cocoa, from which a portion of the oil has been removed to render it less rich and more suitable for some delicate stomachs; "Milk Cocoa," which can be made ready for the table by the mere addition of boiling water; "Caracas Cocoa" and "Caracas Chocolate," both very superior combinations; "Chocolate de Santé" and "Chocolate à la Vanille"; and amongst the fancy kinds, "Cream Chocolates" and "Mixed Bonbons," these last being beautiful specimens of cocoa manufacture, put up with much taste in very elegant boxes. Of the quality of these several exhibits it is not necessary to say much, the reputation of this firm being so well known and established. It appears that Messrs. Fry have been exhibitors at all the great Exhibitions of recent years, at every one of which they have been awarded medals; they have also received the appointments of manufacturers of cocoa to Her Majesty the Queen and his Royal Highness the Prince of Wales.

Lastly, Mons. Menier, who, although in the main a French manufacturer of chocolate, exhibits his various products in both the French and English departments of the Exhibition. This he does, we presume, by virtue of his having chocolate manufactories in both countries. It is only of late years that we have become acquainted with the various chocolates of this firm, which is now one of the largest in the world. They manufacture several kinds of chocolate called "Chocolat Menier," varying in price from 1*s.* 8*d.* gradually upwards to 4*s.* per lb., the prices being minutely graduated to suit the condition and circumstances of every class of consumers. The whole of the chocolates in cakes, whatever the price, consist of a mixture of cocoa and sugar, and not one of them contains a particle of starch. In addition to the chocolate cakes, Mons. Menier exhibits a "Family chocolate" or "essence of cocoa"; this is without admixture of any kind, is in the form of powder, and doubtless, like other similar preparations, has been deprived of a portion of its fat or butter. Also, "Chocolat en Poudre," which consists, like the cakes, of chocolate and sugar; and, lastly, a "Cocoa in powder," which contains arrowroot in addition to cocoa and sugar. This last preparation is obviously made in imitation of the many English cocoas in which farina or arrowroot plays so important a part. These several preparations are put up in a plain business-like and substantial form, with but little regard to mere decoration. On their quality it is unnecessary to dwell. Those of the higher make and price could hardly be surpassed.

We now come to notice another class of exhibits—viz., that of preserved *Animal substances*—butter, meat, fish, and preparations made therewith, or derived therefrom.

Mr. T. J. Clanchy, of Cork, exhibits samples of butter put up in tins for long journeys. This is a very convenient form of packing butter, which is now much adopted, the butter keeping good, although in comparatively small bulk, for a considerable period.

Next to Mr. Clanchy's case is one of Hooker's "Cream Milk" Company, of Shardlow, Derbyshire, and London. "Cream Milk" is described as pure milk from which a large quantity of the water has been removed by "Hooker's process," all the nutritious properties remaining intact, and, being the product of the mixed milk of a large number of cows, it is always of uniform quality. It is also stated that it will keep perfectly sweet in a cool place for two or three days, or even longer, the necessity of two deliveries daily or on Sunday being thereby avoided. It has even been affirmed of a sample of Hooker's "Cream Milk," which had been kept in an open vessel exposed to the action of the air for a period of *three years and three months*, that it was at the end of that time in an excellent state of preservation, free from taint or decomposition of any kind.

Dr. Lindemann, of Paris, exhibits some samples of *Meat* preserved in the raw state. The process not being patented, the inventor was not able to enter into any particulars concerning it, beyond making the important statement to us, that the preservation of the meat is effected solely by physical manipulations and without application of chemicals.

A very interesting and important exhibit is that of Mr. W. T. L. Perry, of Penzance, who displays *Pilchards* preserved in vinegar, with bay-leaves and other flavouring, to which, in this form, he has given the name of "Marinated Pilchards." To this gentleman we are indebted for the opportunity of examining a sample, as also for some particulars as to the catching and preparation of these fish; and we cannot do better than quote his communication:—"The pilchard (*Clupea pilchardus*) belongs to the migratory class of fishes, and in appearance is similar to the herring, the difference being easily known by the position of the dorsal fin, which is exactly in the centre of the body, while that of the herring is rather backward. It makes its appearance on the coast of Cornwall—which is its principal resort—about the middle of July, but the largest quantities are taken in October and November. There are many hundreds of persons engaged in the fishery, the mode of taking them being by drift and sean nets. As an article of food they are very little known beyond Devon and Cornwall, except in the Mediterranean markets, to which they are exported as 'Fermados,' having been cured in salt and pressed so as to obtain the oil from them, after which they are packed in barrels. ..... To get the pilchards into more general use has been my study, and I last year introduced them under the name of Marinated Pilchards." The fish are cooked, preserved in the best malt vinegar with seasoning and bay-leaves, and are packed in hermetically sealed earthenware jars. The sample of Marinated Pilchards we examined was in excellent condition; the fish was well cooked, firm, and of very delicate and agreeable flavour, resembling that of the sardine, but they were much less salt than sardines and anchovies usually are. From their larger size they form an article of substantial food, and are not to be regarded as a mere relish.

Messrs. Southall Bros. and Barclay, of Birmingham, are the exhibitors of an article which is now becoming known under the name of "Soluble Meat." It is stated "that it contains all the constituents of lean beef, including the fibrine and albumen, in a state similar to partially digested meat, the stomach therefore being saved three or four hours' work;" one pound of the preparation being, it is said, equal to a similar weight of fresh meat. It is further affirmed that it is easily miscible with water. It possesses the flavour of roasted meat, and it may be employed in the form of beef-tea or soup when suitably prepared; two tablespoonfuls are sufficient to form half a pint of beef-tea or soup. On opening a small tin of this preparation we were somewhat surprised to notice that it was not transparent, but opaque; further, that it was a little rough or gritty to the palate. On adding a teaspoonful of it to a wineglass of water, we found that it became only very partially dissolved, and that after a little time an abundant sediment collected at the bottom of the glass. In this, on examination with the microscope, the fibrous structure, characteristic of muscular tissue, was plainly discernible. These few and simple observations throw much light on the nature of the preparation in question. It evidently consists of meat which has been subjected to the action of heat, and which has been sufficiently dried to acquire the taste and odour of roasted meat, the fibrine being reduced to the condition of an extremely fine powder, and water or gravy being subsequently added to it. The liquid part of the preparation does not contain any albumen, but this, together with the fibrine, although reduced to powder, is really in an insoluble state—that it is to say, it is not in solution, neither does it become so when subjected to the action of hot water. The name, therefore, which has been given to this preparation is inexact; it is not a soluble form or preparation of meat. The article reminds one forcibly of Dr. Hassall's "Flour of Meat." This consists of the lean portions of meat dried at a temperature below the coagulating point of albumen, and afterwards

reduced to a very fine powder, equalling that of the finest wheat flour, it being put up, not as is Messrs. Southall's preparation in the liquid form, but in that of a flour or fine powder in readiness for being made into soup, beef-tea, and various other articles. It is certainly no very strong recommendation of this so-called "soluble" meat to say that one pound of it is equal to one pound of fresh meat, which contains no less than three parts of water. One pound of Dr. Hassall's "Flour of Meat" is equivalent to four pounds of lean meat deprived of all fat and bone.

In the case of Messrs. Brand and Co., of London, are exhibited a variety of their "Specialities" for invalids. Many of these are very valuable, and, being well known, are much in demand. Messrs. Brand and Co. have earned a deserved reputation by the excellence of their manufactures of preparations for invalids, and it will be unnecessary to enter into any lengthened description of the majority of them on the present occasion; some have already been noticed more than once in the pages of this journal. We will simply enumerate the names of the more important preparations exhibited as a reminder to the medical profession, and afterwards single out one speciality for invalids, with the existence of which we have only recently become acquainted. The two most important of Messrs. Brand and Co.'s preparations are "Essence of Beef" and "Concentrated Beef Tea," both excellent; the firm make also essence of veal, of chicken, and of mutton, and "Beef-tea Jelly," also "Broths" of mutton and chicken, "Turtle Soup," "Turtle Jelly," and, lastly, "Meat Lozenges." But the preparation we wish to notice more in detail is their "Fibrous Extract of Beef." This extract is stated to contain, in a concentrated form, all the nutritious elements of the meat, retaining most of the fibrine and a percentage of fat. A wineglassful of this extract is to be placed in a breakfast cup, which is then filled up with boiling water. This extract has a much greater consistence than Southall's so-called "Soluble Meat," but, like it, it is opaque, and does not dissolve except in part in water, but throws down a copious sediment. This sediment differs, however, remarkably from that of Southall's preparation, in the fact that it does not possess any grittiness, that it is soft and flocculent, and that viewed under the microscope it does not exhibit a trace of muscular structure. A further investigation establishes the fact that this fibrous extract of beef is not fibrinous at all, but albuminous, the albuminous extract containing a little of the osmazone, organic extractive matters, and soluble salts of the meat. Although not fibrinous, we believe that it is really much more digestible and more easily assimilated than if it had consisted of fibrine in the state of muscular fibre. It may be regarded as one of the most valuable of all the preparations for invalids prepared by Messrs. Brand and Co. It should be called "the *Albuminous* Extract of Beef."

Messrs. Brand and Co. likewise exhibit "Potted meats" and a sauce of their own manufacture. Of these we will only say that the potted meats were entirely free from all artificial colouring matter, and that the sauce is one of a very superior flavour.

In the portion of this report devoted to the description of the French food exhibits we noticed in some detail the concentrated soups prepared by the Société des Potages Economiques, and we have now to refer to some rather similar, but by no means identical, preparations—viz., the soups of Messrs. Geyelin and Co., concentrated food manufacturers, of London. These likewise consist of combinations of vegetable and farinaceous substances, with concentrated bouillon or extract of beef, only that in these the meat element is so reduced in amount as to bring the price of these articles down to a very low figure. The chief kinds of soups thus prepared are—"Julienne" (which is one of the best), "Tapioca Bouillon," "Vermicelli," "Pea-soup," "Cagliari," and a compound of "Tapioca and Milk" spiced. These several articles seem to be prepared in a very inexpensive form, so as to allow of their use among the poor, and, indeed, it would appear that they are largely purchased by the charitable for distribution amongst the needy. If the contents of the packets were added to some meat stock, their flavour and nourishing properties would doubtless be much enhanced.

Messrs. McCall and Co., Houndsditch, London, exhibit the well-known "Paysandu Ox Tongues." These tongues might be tasted, according to the prospectus, at all the refreshment rooms of the Exhibition, we hope *not* gratuitously, or the consumption would be something too considerable. The tongues come from South America, where Messrs. McCall and Co. have no less than three large factories for preserving and packing them. These factories are placed in districts where very large quantities of cattle are slaughtered. When killed the flesh is cut into slices, dried, salted, and packed in stacks, in which state the meat is ready for use. Messrs. McCall and Co. secure the tongues of the countless thousands of oxen so killed, which, after being carefully preserved and packed, are sent to this and other countries, where they are largely consumed.

Another exhibitor of preserved provisions is the well-known firm of Tallerman, of London. They display, among other things, samples of Corned beef and Bœuf demi-sel.

Messrs. Whitehead and Company, of the Fitzroy Works, Queensland, and of Fenchurch-street, London, exhibit a variety of Preserved Meats, "Solid Essence of Beef," "Liebig's Meat Extract," different kinds of soups put up in a liquid state, and a series of "Solidified Soup Squares." It is these latter which will chiefly claim our notice. A sample of "Luncheon Beef" we examined was in an excellent state of preservation, sweet, tender, and but little overdone. The solid essence of beef is put up in skins, and is really a concentrated beef-tea. We tasted some of the soups preserved in the liquid way, and found them excellent. The "Soup Squares" are in packets. The majority of these are stated to contain "the soluble parts of a pound and a half of beef, which, with the other ingredients, are sufficient to make a pint and a half of soup." The principal kinds are "Julienne," "Household Soup," "Green Pea," "Pea," "Carrot," "Chestnut," "Mulligatawny," and "Meat Purée." We have tried some of these soups, and amongst them "Julienne," "Household," and "Mulligatawny," with results which, considering the ease with which the soups are prepared and the price at which the squares are sold, were extremely satisfactory.

The next preparation to be noticed is one exhibited by Messrs. F. Wyndham and Co., of London, called "Esprit des Œufs"; it is what its name implies, a combination of spirit and eggs, and is analogous to the "spiritus vini Gallici," of the British Pharmacopœia, with this remarkable difference, however, that the mixture contains also the shells dissolved. This is a very pleasant as well as convenient preparation, and the sample we examined was as sweet and fresh as if only just made from fresh eggs.

The exhibitors of *Isinglass* and *Gelatine* are Messrs. Wigan and Co., of London; Mr. John Green, London; and Messrs. Mackay, of Edinburgh. The latter exhibits a "Pure Extract of Calves' Feet," guaranteed to be so carefully obtained from fresh calves' feet that the absence of impurity of every kind may be implicitly relied upon. A packet of the extract, costing sixpence only, is sufficient for a quart of jelly.

Correspondence.

"Audi alteram partem."

PECULIAR MOUTH AFFECTION PREVALENT AMONGST INDIAN TROOPS.

To the Editor of THE LANCET.

SIR,—The observations of Surgeon-Major Hunter in THE LANCET of the 24th ult. on a novel form of buccal affection which prevailed among the sepoys under his charge are of considerable interest, especially as he considers it may interfere with the future employment of Indian troops in Europe.

Cases of a similar nature occurred amongst the men under my charge, but the source of the affection was not difficult to trace, and was ascribable to wholly preventable causes. The native sappers, being mostly selected from the pariah class, are habitually large meat consumers; but during the voyage to Malta, and for a long time after their arrival, they were placed on an almost exclusive grain diet, the daily ration being as follows:—Flour, 1 lb.; rice, 1 lb.; ghee, 2 oz.; curry-stuff, ½ oz.; salt, ¾ oz.; dhall, 4 oz. on five days out of seven; potatoes and onions, 4 oz. on two days out of seven. Salt fish was issued on board ship only.

Five per cent. of the total strength were admitted into hospital for dyspepsia and gastric disorders. The tongue was, as a rule, covered with white fur, and fissured longi-

tudinally, in more serious cases scorbutic symptoms manifested themselves. The glossal epithelium desquamated in patches, leaving the denuded surfaces of a red colour, and the fungiform papillæ about the apex became enlarged and prominent. The gums were swollen, and difficulty in mastication was complained of. Catarrh occasionally coexisted, and arose from the unavoidable exposure incidental to camp life.

The health of the patients rapidly improved, and no more cases of a scorbutic nature occurred after the addition of meat and vegetables to the previous ration.

I have observed cases presenting precisely similar appearances to those described by Dr. Hunter in the Andamans, and in Brahmin sepoys suffering from malarial cachexia, who limit themselves strictly to an exclusive grain diet.

In conclusion, Sir, I question the utility of applying a novel and what may be considered an inaccurate term (hyperæmia and not erythema existing) to what is but a prominent local symptom of a constitutional dyscrasia.

I remain, Sir, your obedient servant,

WM. A. LEE,
Surgeon, I.M.D., in Medical Charge Queen's Own Madras Sappers and Miners.

Cyprus, September 10th, 1878.

ON DIPHTHERIA FROM A PREVENTIVE-MEDICINE POINT OF VIEW.

To the Editor of THE LANCET.

SIR,—When I directed your attention to the errors in the statistical basis of Dr. Thursfield's paper on diphtheria, I was inclined to believe that they were not his own, but that the most serious of them, at any rate, had arisen through the ignorance of some person commissioned to compile the tables from the Registrar-General's reports. His letter and lame defence, in your issue of the 31st August, shows that I am mistaken. The assumption that the population of certain counties has been "practically stationary" since 1871, in the face of the fact that in the ten preceding years it had been steadily increasing, is an error quite secondary in importance to the other as to the classification of the fevers. Yet I cannot but notice the specious character of the defence, which is this—"the period of eight years to which the statistics refer consists of parts of two decades." The fact is, Dr. Thursfield's series of eight years has *one year* in the one decade and *seven* in the other. The practical result of taking the population of 1871 as the average of those eight years is, in a series of eight numbers increasing in a constant ratio, to take the second as the mean.

But the other count of my indictment is of supreme importance. It was that the tables published by Dr. Thursfield as "Deaths from enteric (typhoid) fever" really comprise deaths from *all forms of continued fever*, and are derived from tables given by Dr. Farr in his annual appendices to the Registrar-General's reports. I never said they were taken from the report for 1876, but I copied the titles of those tables from it, as it happened to be at hand, and Dr. Thursfield, observing the year specified in the title, jumps at the opportunity of apparently putting me in the wrong, as it seems his paper was written before the 1876 report appeared. Still further to increase the impression of my inaccuracy, he says, "To a *considerable* extent the statistics were *necessarily* taken from the quarterly returns, and not, as stated by Dr. Russell, from the tables referred to by him in the annual report for 1876." Now those tables are to be found in the report for 1875, so that for only two out of eight years was it "necessary" for Dr. Thursfield to resort to the defective figures of the quarterly returns. It is, however, quite possible that he was not aware of the existence of such tables in the annual reports. But, after all, what does it matter whence Dr. Thursfield gathered those figures, when it is the fact that, wherever obtained, they represent, not "enteric fever," as he entitles them, but "fever," and are so designated by the Registrar-General in all his reports? Your readers have at least a right to protest against this change of designation. As Dr. Thursfield says, "statistics are one thing, and their interpretation is another." I am anxious that your readers should know what his statistics are, being satisfied that thereafter his interpretation of them will count for very little. He grandly adds, "I prefer statistics to analogy" (i. e., the analogy of Scotland), but most people will choose to be guided by a correct analogy rather than by erroneous statistics; and until the English Registrar-General provides additional data, there can be no other statistics obtained regarding the comparative prevalence of the fevers in the large towns of England. Dr. Thursfield's position in relation to this cardinal doctrine of "preventive medicine"—the distinction of the fevers—is hard to determine. In Table 1, in his paper, there is a column headed "Deaths from fever," which is correctly copied from the Registrar-General, yet in the text he refers to it as showing the annual mortality from "typhoid fever." As we have seen in the other tables, he both entitles and refers to figures as composing deaths from enteric fever only, when they really *include all fevers*. In his letter he seems to plead that because in all his statistics as to the various localities "the same classes of disease" are included, therefore "the figures are absolutely correct." Yet in one part of his paper he states: "As typhus fever in its incidence and endemic form is connected with dirt and overcrowding, as in the same way enteric fever is connected with sewer-gas, so diphtheria in its incidence and endemic prevalence is specially connected with dampness of habitations"! It is impossible to reconcile Dr. Thursfield's etiological creed with his statistical practice. There is, on his own showing, exactly the same reason for classifying the two forms of fever apart as for separating diphtheria from either.

About the same time when your contributor was expounding those misleading tables before the Birmingham and Midland Association of Medical Officers of Health, Mr. Netten Radcliffe was lecturing at the Royal Naval College on "Sanitary Fundamentals." With your permission I shall conclude with a sentence from these lectures. "What is true of typhus and typhoid is true of all diseases which have been shown to be influenced by sanitary measures; and the supreme merit of the discrimination of typhoid from typhus in relation to hygiene was the clear and decisive proof then furnished that a true sanitary method must rest upon the discrimination of diseases; or, in other words, that the fundamental principle of true sanitary method was the discrimination of disease."

I am, Sir, your obedient servant,

JAS. B. RUSSELL.

Sanitary Department, Montrose-street, Glasgow, Sept. 6th, 1878.

INDIAN BAEL.

To the Editor of THE LANCET.

SIR,—In reference to your notice of the observations of Sir Joseph Fayrer on Indian bael, permit me to add my testimony to its value, and to direct attention to its importance in the treatment of infantile intestinal mucous affections. My experience of it has been very considerable. Having observed the good results following its administration in the adult, it occurred to me, when I joined the staff of the Edinburgh Sick Children's Hospital in 1863, that it would be a good remedy in the catarrhal diarrhœas of children. In the chronic form of this affection I found it valuable, and in those cases which assumed the dysenteric character especially so. I give it sometimes alone, and in others in combination with sulphuric acid. In cases in which much irritability of the mucous membrane or prolapsus of the bowel is present, the addition of bismuth at the same time is advisable.

The preparation I have generally used is the liquid extract, prepared by Messrs. Gardner and Ainslie of this city. I have found it quite reliable. The chief objection to the liquid extract is the expense. The cause of the high price (eightpence per ounce retail) is, I am informed, the small demand for it. The proportion of rectified spirit in the Pharmacopœia preparation is not sufficient; a slight addition better preserves the extract. It should be more largely used in the catarrhal and dysenteric diarrhœas of infancy and childhood.

Yours truly,

Edinburgh, Sept. 18th, 1878. R. PEEL RITCHIE, M.D.

PHYSICIANS' FEES.

To the Editor of THE LANCET.

SIR,—Dr. Jeaffreson, in your last issue, asks the help of the "general practitioners" to improve the remuneration of the London consultants. Already the "general practitioners" are the best friends of their London brethren,

although these do not sometimes treat them as they deserve. Allow me, as a country "general practitioner" of over thirty years' standing, to suggest that the friendship and kindly feeling between the parties would be increased if the London consultant would, in every case where a patient comes to him for advice who had previously been under the care of a country practitioner, write to him and give his opinion on the case and his proposal for treatment, instead of handing a prescription to the patient. If this were done, country practitioners would send many more patients to the consultants, and greatly increase their income.

I willingly bear testimony to the great courtesy shown by many of the most eminent physicians and surgeons to their country brethren, and, with regret, allow that there are some who, as a rule, never communicate their views to those who have sent their patients for "further advice."

I am, Sir, yours truly,

Sept. 21st, 1878. G. F. W.

AVERAGE AGE OF DECEASED MEDICAL MEN.

To the Editor of THE LANCET.

SIR,—The following may be of interest to readers of THE LANCET, as bearing upon a question which has been recently raised as to the duration of life amongst medical men.

In the ten years from 1867 to 1876, inclusive, there were published in THE LANCET notices of the deaths of 3434 qualified medical men. Of this number, the age at which death occurred was recorded in 2684 instances, or in 78·13 per cent. of the whole number of deaths. The average age at which these 2684 deaths occurred was 56·6 years.

The accompanying table gives the details of each year, with the percentage of deaths occurring during each decennial period of ten years:—

—	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	Total.	Per-centage
Under 30 years of age...	18	10	23	23	27	16	19	17	23	23	199	7·41
Above 30 years of age, and under 40	25	28	25	39	30	32	37	39	47	79	381	14·20
,, 40 ,, ,, 50	16	24	43	24	22	36	26	36	49	66	342	12·74
,, 50 ,, ,, 60	38	39	43	36	49	41	45	50	64	69	474	17·66
,, 60 ,, ,, 70	49	44	39	37	39	52	46	54	74	107	541	20·16
,, 70 ,, ,, 80	36	37	34	31	34	45	56	54	75	96	498	18·55
,, 80 ,, ,, 90	15	11	19	24	23	21	22	20	26	50	231	8·61
,, 90 ,, ,, 100	1	1	0	1	4	1	2	4	4	0	18	0·67
Total deaths, age being recorded ...	198	194	226	215	228	244	253	274	362	490	2684	100·00
,, age being unrecorded	66	85	68	64	76	64	82	86	88	71	750	—
Total deaths...	264	279	294	279	304	308	335	360	450	561	3434	—
Average age at death...	57·11	56·71	54·50	54·9	56·21	57·14	57·18	57·14	57·38	57·72	56·6	—

I think we have here the records of a sufficient number of deaths to justify the statement that the average duration of life amongst medical men is about 56·6 years.

I am, Sir, your obedient servant,

September, 1878. MEDICAL OFFICER OF HEALTH.

THE PARIS EXHIBITION.

(From our Paris Correspondent.)

VI.—THE BRITISH SECTION (CONTINUED).

THE St. Bede Chemical Company have an interesting exhibition of samples illustrating the manufacture of soda from common salt by Le Blanc's process. Their show-case contains huge bottles of soda-ash, crystal soda, and smaller but not less fine specimens of sulphate of soda, nitre-cake, nitrate of soda, black salt, &c.

Next to the above exhibit is that of Mr. Thos. Jennings, exclusively devoted to magnesia of the best quality. Carbonate of magnesia is shown in blocks of various sizes, and in powder; and calcined magnesia in bottles and tins.

The proprietors of the Langthorne Chemical Works exhibit refined saltpetre of great purity, in crystals and granulated. Their specimens of nitric, sulphuric, and hydrochloric acids are good, and those of acetic acid are very varied in strength and quality. They have also a fine show of nitrates and chlorates of barium, strontium, sodium, &c.

The specimens of Reds displayed by Messrs. Leech and Neal are exceedingly good, especially their Turkey and Indian reds. The latter are stated to contain more than 90 per cent. of pure oxide of iron, and, as they are entirely free from the presence of any colouring vegetable matter, they resist the influence of heat; they are, moreover, of value in protecting wood and iron.

The Liver Alkali Works Company, of Liverpool, have an exhibition of samples of caustic soda, showing great excellence of manufacture.

Messrs. Charles Lowe and Co. show their products from coal-tar. They exhibit fine samples of carbolic acid in blocks and granulated; picric acid in paste and crystals; rosolic acid in tablets and crystals; naphthaline sublimed and melted; pure naphthaline tetrachloride; and sulphovinates of ammonia, soda, potash, iron, and zinc. The destinctive mark of the manufacture of Messrs. C. Lowe and Co. is that they use pure carbolic acid crystallising at 45° Centigrade for the production of picric acid and rosolic acid. Their picric acid is therefore free from nitro-cresylic compounds and resinous matter. Messrs. C. Lowe and Co. can supply this quality of carbolic acid in a granular form, and in a suitable condition for immediate pharmaceutical purposes. It is the crystallised bi-hydrate of oxide of phenol, or mono-hydrate of phenol, discovered in 1862 by Mr. Lowe, that affords them the means of preparing pure carbolic acid. The quantity of carbolic acid weekly turned out by the firm is now 20,000 pounds.

A remarkable and complete exhibit is that of the salts of opium in the show case of Messrs. J. F. Macfarlan and Co., of London and Edinburgh. First we notice five examples of Turkey and Persian opium. Then there are glass cups containing morphin, codein, narcotin, and very beautiful narcein. Next are arranged smaller cups of acetate, sulphate, and hydrochlorate of morphin, sulphate and hydrochlorate of narcein, &c. There are interesting preparations of hydrocotarnin hydrochlor, oxynarcotin, methyl-normarcotin, normarcotin chloride, codein from chlorocodide, diacetyl-codein hydrochlor, dibutyryl-codein, tricodein hydrochlor, dibutyryl-codein hydrochlor, morphin hydrobrom, tetrabutyryl morphin, tetrabenzole morphin, &c. &c. Messrs. J. F. Macfarlan and Co. have also shown very fine specimens of beberine, beberine sulphate, beberine hydrochlor, papaverin, and thebain. I must also mention their samples of antiseptic preparations, salicin, and chloroform.

Messrs. Charles Tennant and Co. have a large, effective, and beautifully arranged show case, in which they have gathered an exhaustive collection of specimens illustrating the manufacture of bleaching powder and of alkali. All their samples are remarkably fine, and the *ensemble* of their exhibition is highly interesting. The specimens are meant to display the various processes of improvement introduced by Mr. James Mactear into the manufacture of soda ash,

black ash, soda crystals, caustic soda, &c., and employed for the regeneration of the sulphur from alkali waste. At the St. Rollox Works over 6500 tons of sulphur have been extracted from alkali waste by the Mactear process. Amongst the other processes of manufacture ably illustrated by Messrs. C. Tennant and Co. are to be noticed those of sulphuric acid, sulphate of soda, chloride of lime, and the regeneration of manganesium.

Near to the above show case is that of Messrs. Mawson and Swan, containing choice specimens of collodion for surgical and photographic purposes. All the varieties of collodion,—standard collodion, hard or horn collodion, jelly collodion, collodion powder—are shown in excellent arrangement. Messrs. Mawson and Swan have given special interest to their exhibit by illustrating the various uses of this substance, which they have prepared with great success and on a large scale during the last thirty years. Without dwelling on the various sorts of collodion exhibited, and which represent different degrees of consistency or composition of collodion pyroxylin, I must at least mention with special praise the flexible elastic collodion reserved for surgical uses. I must also notice the sample of opium exhibited in the same case. It is a form of purified opium prepared according to the process of Messrs. Swan and Proctor, and intended to replace the raw opium of commerce, which is so very variable in its composition, and especially in the proportion of morphia it contains. The opium exhibited is stated to be uniform in respect to the proportion of morphia, the mass containing 9 per cent. and the powder 10 per cent. of the alkaloid, in combination with meconic acid. It is also freed from caoutchouc and oil, so as to be made uniform and satisfactory for practical pharmaceutical employment.

Price's Patent Candle Company has one of the large showcases of the British Section combining artistic arrangement and great variety of samples. It is needless to insist on the display of candles, night-lights, paraffin, glycerine, oils, &c. The photographic illustrations of fat acids form an interesting show round the case. This employment of polarised light, and of photography by means of this light, may become a valuable means of investigating the fat acids. In respect to the articles exhibited, the attention of the visitor is particularly drawn to the fine appearance of the candles and the cheapness of the various qualities, the purity of Price's well-known glycerine, the excellent preparation of paraffin, refined without the use of benzol, &c. Amongst the processes of improvement worked out by this firm, and which may be briefly mentioned on account of their scientific value, are the following:—Saponification by means of sulphuric acid, distillation of fatty bodies in an atmosphere of steam, production of pure glycerine by distillation in water-vapour, and purification of paraffin without the employment of any dangerously inflammable liquid.

Obituary.

JOHN HILTON, F.R.S.

THIS distinguished surgeon expired on Saturday, the 14th inst., after a short illness, at his residence, Hedingham House, Clapham, in the seventy-fourth year of his age. The deceased gentleman had deservedly obtained some of the few high offices and appointments open to our profession, having been appointed surgeon-extraordinary to H.M. the Queen, President of the Royal College of Surgeons, and Consulting Surgeon to Guy's Hospital, at which institution he received his professional education. Mr. Hilton became a member of the College, May 22, 1827. In 1854 he was elected a member of the Council, of which at the time of his decease he was the senior member. In 1859 he was appointed Professor of Human Anatomy and Surgery, when he delivered a course of lectures on "Pain, and the Influence of Physiological and Mechanical Rest in the Treatment of Surgical Diseases." These lectures were published in the pages of THE LANCET, and were issued as a separate work, which rapidly ran through three editions. In 1865 he was appointed a member of the Court of Examiners of the College, and an Examiner in Surgery also at the University of London. In 1867 he was elected Hunterian Orator and President of the College. Mr. Hilton had been a valuable contributor to the advancement of surgical science, not only by his published works, but by papers in THE LANCET, the Transactions of the Royal Medical and Chirurgical Society, and Guy's Hospital Reports. He leaves a widow and several children.

Medical News.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Sept. 19th:—

Garrett, Charles Frederick, Walsall, Staffordshire

The following gentlemen on the same day passed the Primary Professional Examination:—

Newton Bentham, St. Thomas's Hospital; Charles Grinling Bunn, Charing-cross Hospital; Sheppard Ransome Corder, University College; Alfred Mantle, London Hospital.

At the Preliminary Examination in Arts held at the Hall on Sept. 20th and 21st, 109 candidates presented themselves, of whom 37 were rejected, and the following 72 passed and received certificates of proficiency in General Education:—

FIRST CLASS (in order of merit).—1st: Annie Jacob. 2nd: Mary Susan Mungeam. 3rd: J. O. Braithwaite, F. Freeman, J. H. Spitzly, and I. S. Withers. 7th: W. C. Faulkner, I. V. Salvage, and John Smith. 10th: Clarinda Boddy, Thos. Carr, C. E. Cormack, E. F. Halliday, J. W. D. Hooper, Elizabeth Longheed, Catherine Mitchell, A. L. Tireman, and S. H. Wass.

SECOND CLASS (in alphabetical order).—M. Angelo, B. Aslanian, A. J. Beardmore, P. C. C. Billups, H. T. Brickwell, C. J. G. Bunker, H. P. Butterworth, S. Camps, J. R. Cater, C. B. Chamberlain, H. L. G. Chevers, Julia Cock, H. M. Cox, W. S. Crawford, G. Darwen, L. B. Diplock, W. R. Etches, C. H. Evans, Elizabeth Grace Evans, C. H. Fitzroy, R. F. B. Halpin, J. Y. Hicks, J. D. Hill, A. E. Y. Hughes, J. L. Jackson, P. Jennings, A. G. Kealy, W. W. Kingston, H. J. Ley, H. T. G. Linde, C. F. Lovibond, Janet Michie, E. H. B. Nickoll, H. E. Noble, H. G. Plimmer, R. W. Quennell, L. Robinson, W. W. C. Robson, C. H. Sharpe, Edwin Shillcock, W. B. Silverwood, P. W. Smith, A. Sollitt, F. J. Spilsbury, J. H. Spreat, R. G. Taylor, J. T. Tupholme, A. J. Weakley, F. Wells, H. G. O. Wharry, R. Williams, A. Witchell, Everard Woods, and G. R. M. Wright.

[In the list published last week the third and fifth lines should read thus: "Davies, John, Dee Bank, Chester"; "Pollard, John Henry, Shaw, near Oldham."]

ROYAL COLLEGE OF SURGEONS.—There is a vacancy for the appointment of Anatomical Assistant in the Museum, occasioned by the resignation of Mr. Walter Pye, just elected assistant-surgeon and lecturer at St. Mary's Hospital. The Library and Museum, which have been closed since the 1st instant, will be re-opened on Tuesday, the 1st proximo. At the recent preliminary examination in Arts, &c., for the diplomas of fellowship and membership of the College, 410 candidates offered themselves—viz., 128 for the first-named qualification, and 282 for the membership; of this number 71 passed for the fellowship, and 179 for the membership.

UNIVERSITY OF ABERDEEN.—The following have been appointed Examiners for the ensuing year—viz., Dr. Robert Reid, in Anatomy; Dr. John Urquhart, in Chemistry and Physiology; Dr. James Cantlie, in Botany and Zoology; Dr. Thomas J. Maclagan, in the Practice of Medicine and Pathology; Dr. David Greig, in Surgery and Materia Medica; and Dr. William J. Sinclair, in Midwifery and Medical Jurisprudence.

BEQUESTS TO MEDICAL CHARITIES.—Mr. Edward Valentine Pegge Burnell, of Winkburn Hall, Notts, bequeathed £200 to the Nottingham General Hospital, and £100 to the Newark Hospital.—Mrs. Howden, of Carlton-terrace, Edinburgh, bequeathed £700 to the Hospital for Incurables, Edinburgh; £300 to the Royal Infirmary; and £300 to the Convalescent Home.—Admiral Sir George Back, of Gloucester-place, Portman-square, bequeathed £100 to St. Mary's Hospital, Paddington.—The Kent and Canterbury Hospital has received £300 under the will of Miss Mary Martha Freeling.—The Leicester Infirmary has received £100 under the will of Mrs. Musson, of Barkestone.

BOOKS ETC. RECEIVED.

Dr. E. H. Bradford: Reflex Symptoms in Hip-disease.
Dr. R. Liveing on Skin Diseases.
Dr. J. H. Aveling: The Influence of Posture on Women in Gynecic and Obstetric Practice.
Dr. J. J. Caldwell: Involuntary Action of the Nervous System.
Dr. J. J. Caldwell: The Treatment of the Genito-Urinary Organs.

Medical Appointments.

ANDERSON, J. W., M.D., F.F.P.S.G., has been reappointed an Extra Dispensary Physician to the Glasgow Royal Infirmary.

BASTABLE, D. H., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Lallington District of the Burton-on-Trent Union, and for the Clifton District of the Tamworth Union, vice Woods, resigned.

BLACK, P. F., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Junior House-Surgeon to the Carlisle Dispensary, vice Newton, resigned.

BROOKING, C. H., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Stebbing District of the Dunmow Union, Essex, vice Parkinson, resigned.

BRUCE, R., L.R.C.S.Ed., L.S.A.L., has been appointed Resident Medical Superintendent of the Holborn Union Infirmary, Upper Holloway, at £300 per annum, furnished residence, &c.

BRUCE, W., M.D., L.R.C.S.Ed., has been appointed Certifying Factory Surgeon for Dingwall, Ross-shire.

CEELY, R. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Parishes of Delting and Northmavine, Shetland, vice Mitchell, resigned.

COLLINS, MR. J. H., F.G.S., has been appointed Public Analyst for the City of Truro and the Borough of Launceston, at 21s. per analysis, half to be paid by the Town Council and half by the person requiring it, and 42s. for each quarterly report when an analysis is embodied in it, or 21s. per analysis when not.

DOBSON, N. C., F.R.C.S., has been appointed Lecturer on Surgery at the Bristol University College, vice Coe, resigned.

FARR, S. B., L.R.C.P.Ed. & L.M., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Andover Urban Sanitary District, at £30 for one year.

GRAMSHAW, F. S., M.D., L.R.C.S.Ed., L.A.H.D., L.M., has been reappointed Medical Officer and Public Vaccinator for the Stellington District of the Easingwold Union, Yorkshire, permanently.

HODGES, T. H., L.R.C.P.Ed., L.F.P.S.G., has been appointed Certifying Factory Surgeon for Killin, Perthshire, vice Todd.

HOPCROFT, T. F., M.R.C.S.E., L.R.C.P.Ed., has been appointed Surgeon to the Middle District of Dorking Union and to the Workhouse, and Public Vaccinator to Dorking, vice Curtis, resigned.

JACKSON, J. B., L.R.C.P.Ed., L.F.P.S.G. & L.M., L.S.A.L., has been appointed a Medical Officer to the Hockley Branch of the Birmingham Provident Dispensary.

KELLY, J. E., F.R.C.S.I., has been appointed Lecturer on Surgery at the Ledwich School of Surgery, Dublin, vice Barton, resigned.

LAWRIE, J., M.D., has been reappointed a Dispensary Physician to the Glasgow Royal Infirmary.

LYLE, T., M.D., has been appointed Physician to the Exeter Dispensary, Exeter.

MATHER, G. R., M.D., F.F.P.S.G., has been reappointed a Dispensary Physician to the Glasgow Royal Infirmary.

MATURIN, L., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Blessington and Ballymore Dipensary District of the Naas Union, at £125 per annum and fees, and £15 per annum as Medical Officer of Health, vice Given, resigned.

PAUL, F. T., F.R.C.S.E., has been appointed Demonstrator of Physiology and Histology at the Liverpool Royal Infirmary School of Medicine, vice Ashby, resigned.

VIPAN, C., M.R.C.S.E., has been appointed Medical Officer for the Hurst-green District of the Ticehurst Union, Sussex, vice Sherrard, resigned.

WEIR, J. W., M.D., F.R.C.S.Ed., has been reappointed an Extra Dispensary Physician to the Glasgow Royal Infirmary.

WHITE, W. E., M.B., C.M., M.R.C.S., L.S.A.L., has been appointed House-Surgeon to the Royal South Hants Hospital, Southampton, vice Wade, resigned.

WHITTLE, E. G., M.B., L.R.C.P.I., F.R.C.S.E., has been appointed a Physician to the Brighton and Hove Dispensary, vice Seymour, resigned.

WILLES, W., M.R.C.S.E., L.R.C.P.Ed., & L.M., has been appointed House-Surgeon to the Royal United Hospital, Bath, vice Moore, whose appointment has expired.

WYLLIE, W., M.D., C.M., has been appointed Certifying Factory Surgeon for Kirkby-Lonsdale.

Births, Marriages, and Deaths.

BIRTHS.

JACOB.—On the 18th inst., at Ely-place, Dublin, the wife of Archibald Hamilton Jacob, M.D., of a son.

MACCALL.—On the 19th inst., at York-street, Cheetham, Manchester, the wife of William N. Maccall, M.D., of a son.

MACKAY.—On the 20th inst., at Clarence-street, Edinburgh, the wife of John Sutherland Mackay, M.B., of a daughter.

MORSON.—On the 21st July, at West Maitland, New South Wales, the wife of Alex. K. Morson, Esq., M.D., of a son.

TATE.—On the 11th ult., at Jhansie, Central India, the wife of Robert Tate, M.D., Surgeon-Major, Army, of a son.

WALSH.—On the 16th inst., at Castlebar, co. Mayo, the wife of Charles J. Walsh, L.K.Q.C.P.I., of a son.

MARRIAGES.

MARTIN—WHITTLE.—On the 19th inst., at St. Mark's, Worsley, by the Hon. and Rev. the Earl of Mulgrave, Vicar, assisted by the Rev. Charles Heath, B.A., Vicar of Walkden, and the Rev. J. Cater, Curate of Worsley, William Young Martin, F.R.C.S.E. & L.R.C.P., of The Limes, Walkden, to Sarah Elizabeth, only child of William Whittle, Esq., of Park House, Worsley. No cards.

MOSS—WINNETT.—On the 19th inst., at Charlwood, Surrey, Boyd Moss, F.R.C.S.E., to Caroline, daughter of the late William Winnett, Esq.

DEATHS.

ALBURY.—On the 23rd inst., at Lime-place, Higher Broughton, Manchester, William John Albury, L.R.C.P.Ed., aged 42.

ARTHUR.—On the 10th inst., at Gwennap, Samuel Pellew Arthur, M.R.C.S.E., aged 73.

BURROUGHS.—On the 16th inst., at Clifton, John Beames Burroughs, F.R.C.S.E., aged 72.

CLARK.—On the 12th inst., at Birkheads Lodge, Wray-park, Reigate, Frederick Cheesman Clark, M.R.C.S.E., aged 28.

CLARKE.—On the 24th ult., at Georgetown, Demerara, Thomas McRae Clarke, M.B., aged 24.

HAIGH.—On the 7th inst., at Scarborough, Henry William Haigh, F.R.C.P.Ed., aged 44.

LORIMER.—On the 14th inst., at Bromley-road, Lee, Kent, Dr. Alexander Lorimer, late Deputy Inspector-General, Madras Service, aged 67.

MEREDITH.—On the 19th ult., at Viper Island, the Andamans, India, of typhoid fever, Edward Bishopp Meredith, L.R.C.S.I. & L.K.Q.C.P.I., Surgeon, Bengal Medical Department, aged 24.

MITCHELL.—On the 11th inst., at Kingston, Surrey, Samuel Mitchell, M.R.C.S.E., aged 83.

PARKER.—On the 17th inst., at Cavan, William H. Parker, L.K.Q.C.P.I.

PINCHING.—Lost overboard, on the 16th ult., from the steamship *El Dorado*, one day's sail from Colombo, William Wyatt Pinching, L.R.C.P.

PRIESTLEY.—On the 4th inst., at St. Faith, Norwich, William Stanton Priestley, M.R.C.S.E., aged 61.

ROBINSON.—On the 11th ult., at Jamaica, Robert Robinson, Surgeon in the Army.

SHILLETO.—On the 8th inst., at Bootham, York, Robert Shilleto, Surgeon, aged 78.

SMITH.—On the 7th inst., at Brondesbury-road, Kilburn, George Roche Smith, M.R.C.S.E., late Surgeon to the 7th Hussars and 2nd Queen's Royals, aged 75.

WILLIS.—On the 21st inst., at Barnes, Surrey, Robert Willis, M.D., aged 79.

[N.B.—*A fee of 2s. is charged for the insertion of Notices of Births, Marriages and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

THE TREATMENT OF CHRONIC DIARRHŒA BY COLD-WATER ENEMATA.

DR. MESSEMER, of New York, has recently published a paper in the *American Journal of the Medical Sciences*, recommending cold-water enemata as a therapeutic agent in cases of chronic diarrhœa. He uses injections per rectum of a quart of cold or iced water *after* every loose motion; but only in quantities of half a pint at a time, after each injection the exit of the water being assisted by pressure over the abdomen. Believing that the increased number of stools was due to increased sensibility and irritability of the rectum, which was kept up by irritating material, such as mucus and fæces contained there, it was suggested to Dr. Messemer that, by cleansing the rectum of such by injections, the exciting cause might be removed, or at least mitigated. He considers also that the cold water acts by protecting the mucous membrane of the rectum, and when slowly injected, so as not to excite peristaltic action, it keeps the rectum distended and its walls apart, thereby preventing them irritating each other.

L.R.C.P.I.—The information asked will be found in the Students' Number of THE LANCET, published on September 14th, 1878.

HEMIPLEGIA WITH STARTING OF THE LIMBS.

To the Editor of THE LANCET.

SIR,—May I suggest the following line of treatment (which I have found useful in somewhat similar cases) for the consideration of your correspondent, "M.B.," with reference to the case he writes of in your issue of the 7th inst.

In the first place, I should lay aside strychnia and galvanism, as being likely only to aggravate the symptoms, especially galvanism if applied so as to produce "reflex" instead of direct muscular contraction. Then I should prescribe a draught containing full doses of all or some of the following drugs:—Hyoscyamus, bromide of potassium, solution of extract of ergot, cannabis indica, and dilute hydrocyanic acid, to be taken each night at bed-time, the spine having been well rubbed along its whole length with a belladonna, chloroform, and soap liniment. The patient should then lie on the *sound side*, with the head on a high pillow comfortably arranged. The diet, of course, should be carefully regulated, and all stimulants avoided. If he suffer from acidity or a gouty tendency, which is most likely to be the case, I would give him now and then, just before dinner, an aromatic bitter and alkaline draught, with perhaps a little colchicum. This will also favour digestion, and promote the removal of the clot at the same time. The bowels should be strictly kept open, and for this purpose I would give him an after-dinner pill, containing at itle of the aqueous extract of aloes, or a wineglassful of the compound decoction of aloes, changing this from time to time for a morning draught of some saline aperient, say a wineglassful of the Hunyadi Janos water in half a tumblerful of warm water. All evening reading or excitement should be avoided, and the patient should not go up stairs to bed, but should sleep and live on the same floor. All complications should, of course, be treated as they arise on the usual principles.

I am, Sir, yours truly,

Brighton, Sept. 9th, 1878. J. M. B. SCATLIFF, M.D.

HAY FEVER.

AN amusing little Transatlantic journal, called the *White Mountain Echo*, as yet in its infancy, and dating from Bethlehem, has in its ninth (the 1st September) number some very interesting notes on hay fever—a subject which was brought before the United States Hay Fever Association on the 2nd inst. It appears that Dr. Woodward, of Worcester, Massachusetts, has been making a microscopic examination of the pollen of a large number of common weeds and flowering plants found in gardens and fields, and has come to the conclusion that the pollen of all plants credited with the production of hay fever is invariably globular in form. But no symptoms of hay fever were produced by these plants, even when kept in the ordinary living-rooms, until the 20th of August, from which hay-fever patients, at all events in America, seem to date the commencement of their attacks. Bethlehem is spoken of as a haven of rest from hay fever and all its attendant ills; but a perusal of the proceedings at the meeting only leads to the practical conclusion that all persons habitually suffering from hay fever should, if possible, avoid places where globular pollen grows, and this, we take it, is a rather difficult thing to do, particularly in America. But, as Dr. Woodward believes that pollen does not induce hay fever at all, even this precaution is not necessary. Indeed it does not seem that the speakers at the meeting were enabled to throw much light upon the proximate cause of the disease. But the juvenile periodical from which we quote shows that, whatever theory be correct, hay fever cannot be either caught or perpetuated at Bethlehem, and no sneezes spoil the enjoyment of the *White Mountain Echo* and "the musical confusion of sounds" heard there.

R. R. should apply to a registered medical practitioner, and follow his advice.

"GELSEMINUM" v. "GELSEMIUM."

To the Editor of THE LANCET.

SIR,—Your correspondent, "F. P.," in your journal of last week, has referred me to the works of De Candolle and those of Bentham and Hooker, "or any other similar work," as controverting in point of priority of date my statement in your previous issue in favour of gelseminum *versus* gelsemium.

I will simply say at the outset that Professor A. Eaton assigns to Wildenow the authorship of the name; and I, upon my part, beg to refer "F. P." and those of your botanical readers who take an interest in nomenclature for information upon the question at issue to that noble work of Professor Morison, of Oxford, entitled "Plantarum Historia Oxoniensis Universalis, pars tertia, seu Herbarum Distributio Nova." &c. &c., fol. 612, published in the year 1699 (the author dying in 1683), where, under the heading "Plantarum Anomalarum Pseudo-apocynum," will be found the name gelseminum as having been employed by Ray and Park (*sic*). It becomes then only necessary to remark that the former of these, an illustrious botanist (Ray), was born in 1628 and died in 1705; whereas Jussieu was born in 1686 and died in 1758; and that Morison, referring to the latter (Park) as employing the term gelseminum, assigns to his work the date 1679, which I believe effectually disposes of the authorship of Jussieu in this matter.

I am not personally acquainted with the work of any botanist bearing the name of Park during the period referred to by Regius Professor Morison, and am of opinion that John Parkinson, who was born in 1567 and died in 1641, is the author indicated, which, if it be so, carries the birth of gelseminum far beyond Ray. At all events, whether Park or Parkinson be meant, it does not affect the date assigned to the work, in which the description, according to Morison, stands as follows:—"Pseudo-apocynum Virginian. aliis Gelseminum maximum Amer., flo. phœnicco Park. 1679."

Under all the evidence offered, it would seem most likely that the change of name has resulted from an early typographical error, which the gentlemen who compiled the American Pharmacopœia have unwittingly followed, to the detriment of their followers also.

Your obedient servant,
SAML. SMITH,
Bristol, Sept. 23rd, 1878. Surgeon-Major, 1st Ad. Batt. G.E.V.

Mr. James Dougal, (Strathaven.)—Our correspondent probably refers to a paper by Dr. Burney Yeo, read before the Clinical Society on March 9th, 1877, and published in abstract in THE LANCET on the 17th of the same month. The paper as it appears in the Transactions of the Society may contain the references desired.

Mr. Henry Greenway.—The idea of infectious wards for paying patients has been carried out in the London Fever Hospital for years.

EXCISION OF BOTH KNEE-JOINTS.

To the Editor of THE LANCET.

SIR,—In reply to Mr. Folker's letter, which appears in your last week's issue, I would beg to explain that until Saturday last I had not seen his paper on Excision of both Knee-joints. I read my own paper at a meeting of the Northumberland and Durham Medical Society about a month, it seems, after the publication of his paper in the *British Medical Journal*; and had I seen the latter I would certainly have made some reference to it, and acknowledged its priority. I made many inquiries, and in different directions, in my endeavour to ascertain whether the double operation had been done previously; but I failed to receive one reply in the affirmative. Possibly the only interest attaching to my case was the age of the patient at the time of the operation—namely, forty-five. Before he left the infirmary he was able to walk about without the aid of sticks or crutches.

I hope this letter will be satisfactory to Mr. Folker, to whom I am obliged for his directing my attention to his paper.

Yours truly,
Sunderland, Sept. 23rd, 1878. J. BARRON.

WEST LONDON HOSPITAL, HAMMERSMITH.

THE following notice of this institution should have appeared in our Students' Number:—Beds, 60; in-patients, 509; out-patients, 24,803. Consulting Physician: Dr. Henry Maudsley. Consulting Physician-Accoucheur: Dr. W. O. Priestley. Consulting Surgeons: Messrs. Lane and William Bird. Physicians: Drs. Goddard Rogers and Thorowgood Physician for Diseases of Women: Dr. Wiltshire. Surgeons: Messrs. Teevan and Alfred Cooper. Surgeon for Diseases of the Eye: Mr. B. J. Vernon. Assistant-Physicians: Drs. Fish, Milner Fothergill, and Vincent Harris. Assistant-Surgeons: Messrs. Butlin, Keetley, and Ottley. Surgeon-Dentist: Mr. Sewell. Administrator of Anæsthetics: Mr. T. G. Alderton. Resident Medical Officers: Two House-Surgeons and an Apothecary. The practice of the hospital is open to all students and members of the medical profession. Gentlemen desirous of acting as Clinical Clerks or Dressers can obtain all information on application at the hospital.

M.B., C.M.—Our correspondent will be his own best adviser. The answer to the question depends on his age, and on the value he sets on his time and services, as much as on the wealth of the patient to whom he entirely gives his time.

Dr. James W. Edgar.—Please repeat the question.

THE IRISH GRADUATES' ASSOCIATION.

To the Editor of THE LANCET.

SIR,—It was with great surprise that I read the letter of "L.R.C.S.I." in your issue of the 21st inst., suggesting that female members of the profession should be excluded from the Irish Graduates' Association. As from the wording of his letter I fear "L.R.C.S.I." is not fully acquainted with the objects for which the Irish Graduates' Association was formed, I write this as an explanation.

This Association, Sir, was set on foot, not, as your correspondent seems to think, for medical and surgical discussions, but for the promotion amongst those members of the profession who hold Irish qualifications, and who practise in England, of a special spirit of friendly union, distinct from that bond which of course unites all medical men of whatsoever nationality. The annual meeting held in the board-room of the Mineral Water Hospital in Bath took place after the meeting, at which the members of the British Medical Association determined that ladies should no more for ever grace their gatherings, so that the minds of the Irishmen were as fully imbued with the necessity of being down on the ladies as were those of their English brethren who were present on that very noisy and disorderly occasion. But, Sir, the Irish graduates having discussed this subject in that cool and calculating spirit so characteristic of the Irish nation, came to the following, as I think wise, conclusion—viz., that as the Irish Graduates' Association was more a social than a scientific body, the presence of ladies at the annual gatherings was rather to be desired than otherwise.

Now, Sir, I hope "L.R.C.S.I." will see that it would not "be preferable to exclude females from our meetings," and that though we might manage to do without the assistance of the gentler sex, still it is well sometimes to have their assistance, and I think we may feel confident that the feminine element introduced in this way will prove a source of amalgamation amongst Irishmen.

In conclusion, I would express a hope that the Editor of THE LANCET will not still decline to notice the Association simply because the name of a female is retained on the list.

I am, Sir, yours truly,
St. Leonard's-on-Sea, Sept. 23rd, 1878. RICHD. HEATH, M.D.

To the Editor of THE LANCET.

SIR,—I, too, have received a list of members, copy of annual report, &c., from one of the Hon. Secretaries of the Irish Graduates' Association, and am much surprised to see the name of a medical woman figuring thereon.

In a circular calling my attention to the Association, received some time ago, there occurs the following resolution:—"That the membership of the Association be limited to medical *men* holding Irish qualifications wherever resident." And the official receipt for my annual subscription is headed, "Association for Qualified Irishmen Practising in England."

Now, it would be interesting to know how Dr. Elisa L. Walker Dunbar, of Clifton, has been transformed into an "Irishman practising in England"? Or, indeed, how she was admitted at all under the above resolution? Till this is explained, I, for one, will withhold support to the Association.

Your obedient servant,
Leicester, Sept. 21st, 1878. ALEX. M'COOK WEIR, M.D., &c.

ANTIQUARIAN DISCOVERIES IN FERMANAGH.

TWO tumuli were opened last week at Castlearchdale, and various carvings discovered on the walls of the chambers, one of the mounds containing a skeleton, accompanied by cremated bones. Among the symbols delineated was that of a hatchet, which it is stated has never before been noticed in Ireland, although not unknown in the caves of Brittany.

Justice.—If the duties are faithfully discharged, we apprehend there would be no good ground of complaint.

HYPODERMIC INJECTIONS OF ERGOTINE.

To the Editor of THE LANCET.

SIR,—I shall be obliged if any of your readers will give me their experience of hypodermic injections of ergotine in lingering labour from insufficient uterine contraction, the dose employed, the frequency of its repetition, and the part of the body operated on.

Yours faithfully,
Sept. 24th, 1878. F. D. L.

ELECTRIC LIGHTING.

THE September number of the *Sanitarian* reminds us that lighting our rooms and public buildings by electricity has sanitary as well as luminous aspects. An ordinary gas-burner consumes about forty-five cubic feet of oxygen per hour, as well as sometimes giving off sulphurous acid, and now and then carbonic oxide gas. Kerosene oils are said to be equally deleterious. (Is this so?) Heat, of course, has to be considered, and altogether there can be little doubt that electric lighting has for domestic purposes many sanitary advantages over gas, oil, or candles.

Mr. Little.—As the accident was caused by a flaw in the metal, we do not see the need to condemn the instrument generally.

NON-UNITED FRACTURE.

To the Editor of THE LANCET.

SIR,—Having recently had a case of this kind, my account of its treatment may interest and be of use to "A Country Surgeon."

The fracture was a transverse one in the upper third of the femur, and did not seem at the time to present any peculiar difficulty in treatment. However, at the end of six weeks, when I removed the long splint, preparatory to applying a starch bandage, the limb slowly bent in my hands, giving the sensation very much as if the thigh were made of stiff putty; in short, I found the ends of the bone ununited, rounded, and overriding. I put the limb up again in the long splint, bandaging and keeping the parts in position as carefully as I could; but at the end of the second period of six weeks I had the mortification to find the bone still ununited, with greater displacement than before. I discarded the long splint then, and I hope for ever, and adopted the following plan with perfect success:—To reduce the deformity in the first place, I used continued extension by pulley and weight (the latter a flat iron of six pounds), raising the foot of the bed by bricks. This, and this alone, as I expected it would do, brought the apparently rounded ends of the bone into perfect apposition. I then made a Scultetus' bandage, and applied it with starch from below the knee right up on to the pelvis, at least as far as I could, so as to command both joints. Over this first bandage I moulded a poroplastic splint, carrying it well up over the pelvic bones, and over all another Scultetus' bandage, well starched like the other. In two days this bandage was quite dry and as hard as a board; indeed the man said his leg felt as if it was in a drain-tile. During the application of these bandages the limb was kept on the stretch by my assistant, and then transferred as before to the weight and pulley. I gave my patient porter, chemical food, and cheered his drooping spirits with the promise of a good result. At the end of three weeks I removed the weight, and at the end of the sixth week he got up with the bandage still on. I found perfect union had taken place, and that without the least deformity or shortening, and, though still somewhat stiff and lame, my patient has gone to work, and is gradually recovering the use of his long imprisoned joints.

The question naturally arises, Whose fault was it that the bone did not unite? I think in my case the blame must be equally distributed between doctor and patient. I blame myself in not (as is my almost invariable custom) starching the bandage of the first long splint, the consequence being that it was constantly getting loose, and requiring readjustment. To my mind this same long splint is a barbarous, useless, and inefficient invention, and not worthy the surgery of the day. It is most difficult of application, and, when applied, perfectly useless as a means of sustained extension.

Yours truly,

JAMES MORE, M.D.

Rothwell, Northamptonshire, Sept. 21st, 1878.

Dum Spiro Spero.—We cannot answer the question. Much depends on the terms usual in the neighbourhood, of which the highest should be taken as a guide.

X. O.—Surgeons of repute, in whom the public may have confidence, do not make a specialty of the class of cases referred to. Consult a qualified practitioner.

L. W. A. might address his inquiry to Sir Joseph Fayrer.

CARBOLIC ACID IN SMALL-POX.

To the Editor of THE LANCET.

SIR,—In reply to Mr. Lawson's question in your issue of to-day, I have no hesitation in expressing a strong conviction that the effects he refers to are due to primary vaccination rather than to carbolic acid. I derive my opinion from numerous observations made at the London Small-pox Hospital by the late J. F. Marson, who was for more than forty years its resident medical officer. Having during nearly the whole of that period enjoyed an intimate acquaintance with Mr. Marson, I have repeatedly been invited by him to watch the trials of many among the various means that at different times have been brought forward for the prevention of "pitting." It is almost superfluous to state that in all these instances comparative experiment was instituted. Mr. Marson's logical mind was satisfied with nothing short of the most exact reasoning, and he therefore rejected all conclusions based upon experiments on vaccinated individuals. The result was that we arrived at the opinion, which he held very strongly—viz., that the only prevention of pitting was to be found in the aborting power of vaccination.

All practitioners who have had the charge of small-pox patients will be ready to endorse the observation of Dr. Taylor, that small-pox after vaccination and small-pox in unvaccinated persons are two different diseases. It will be to them a thing not altogether rare to have seen the disease cut short *in all its stages* where vaccination has been effected; while, on the contrary, such an occurrence is unheard of in the unprotected.

I remain, Sir, your obedient servant,

Holloway, Sept. 21st, 1878. W. B. KESTEVEN, M.D.

A NOVEL USE FOR APOMORPHIA.

AT the late meeting of the French Association for the Advancement of Science, M. Verger related the case of a child with a plumstone impacted in the gullet. No instruments being at hand for the extraction of the foreign body, recourse was had to emetics. Ipecacuanha failing to induce vomiting, it was decided, after consultation, to inject apomorphia subcutaneously. Two injections were practised, amounting in all to two and a half milligrammes of the alkaloid—not a large amount. Vomiting was soon excited, and the foreign body expelled.

TYPHOID FEVER.

To the Editor of THE LANCET.

SIR,—In your issue of August 31st appears a short analysis of the above fever by Dr. H. M. Tuckwell, whose experience was sixty cases in nine years. I have seen as many in three months in Whitehaven, Cumberland, and about half that number in a fortnight at the Uppingham Grammar Schools with Dr. Bell. With the exception of Dr. I'Anson, the other practitioners of Whitehaven and Carlisle, no medical man has seen so many cases, and had them under his treatment, as myself. Double relapsing typhoid is rare; but what will Dr. Tuckwell say to *treble* (if I may so term it) relapsing typhoid? I had two cases under my own treatment, and both got well. What the medical practitioners and myself in Whitehaven would have done without ordinary beef-tea (don't forget the isinglass in it), stimulants, and preparations of opium, I do not know. Precisely the same treatment was carried out during the last severe epidemic at Uppingham by Dr. Bell. The medicine prescribed by him in almost all cases was dilute hydrochloric acid and chlorate of potash; stimulants frequently during the night and day. As to the success of the treatment there can be but one opinion. Dr. Tuckwell should remember that typhoid is like scarlatina. You may have it in a very mild form or severe; if the former, the patient requires nothing but a bucket of cold water to drink, and go to bed; in the severe form, if Dr. Tuckwell carries on his same mode of treatment in his next sixty cases, he will lose considerably more than ten out of his sixty patients. Drs. I'Anson, Bell, and myself have not on an average lost more than five out of sixty, and if we picked our own cases it would not come to that.

Yours respectfully,

Heckington, September, 1878. C. DAVIDSON.

To the Editor of THE LANCET.

SIR,—If "AN ENQUIRER" will refer to the following treatises, I think he will obtain the information he seeks upon the age of typhoid patients:—Lombard et Fauconnet: Etudes Clin. sur les Fièvres Typhoïdes (*Gaz. Méd.*, 1843, p. 502). Griesinger: Infections-krankeiten zweite Auflage (Erlangen, 1864, p. 154). Gaultier de Claubry: Rap. sur les Epidemics qui ont régné en France de 1841 à 1846 (Mém. de l'Acad. de Méd., tom. xiv., 1849, p. 20). In vol. xiii. of the Pathological Society's Transactions, p. 62, Dr. Wilks records a case of a woman aged seventy. The oldest in which enteric fever has occurred, and with which I am conversant, is the one recorded by Hamernyk, aged ninety.

Yours truly,

Durham, September, 1878. J. FERENS OLIVER, M.D.

To the Editor of THE LANCET.

SIR,—In Murchison's Treatise on Continued Fevers there is given a list of 1772 cases of typhoid fever admitted into the London Fever Hospital during ten years, classed according to ages, and only *one* case, and that marked as doubtful (thus 1?) appears to have occurred between the ages of seventy and eighty. It is stated by the same author that the characteristic abdominal lesions have been found by Lombard in a woman aged seventy-two; and by M. D'Arcy in a woman aged eighty-six. Liebermeister gives a tabulated list of 1714 cases admitted into the hospital at Basle from 1865 to 1870; but there is only *one* case said to have occurred at an age exceeding seventy years (Ziemssen's Cyclopædia of Medicine, vol. i., p. 73).

Yours faithfully,

Penzance, Sept. 22nd, 1878. A. B. BERRY.

To the Editor of THE LANCET.

SIR,—In answer to "AN ENQUIRER" as to "the latest period of life at which cases of typhoid fever have been met with," I desire to state that I have seen one well-marked case at the age of seventy-two. Knowing that it is extremely doubtful whether typhoid ever occurs—most authors declare it never does—after the age of forty or forty-five, I watched the case closely and with more than usual interest, and as it ran its course I found all the symptoms well-developed and unmistakable. The man died on the twenty-third day. I certified the death as typhoid fever.

Yours truly,

Southport, Sept. 23rd, 1878. G. B. BARRON, M.D.

To the Editor of THE LANCET.

SIR,—I am able to supply "Enquirer" with one case of typhoid fever in a subject above seventy years of age. During an epidemic of typhoid two years ago I had a case of a labourer in his seventy-fourth year, who recovered after a very tedious convalescence.

Yours truly,

Kilworth, September, 1878. THOMAS MACAULAY.

To the Editor of THE LANCET.

SIR,—In answer to "Enquirer," I beg to state that I have at present an unmistakable case of typhoid fever in a patient aged seventy-three, this being the fourth case occurring in the same family lately.

I remain, Sir, yours truly,

Middlesborough, Sept. 24th, 1878. A. H. NORMAN, L.R.C.P.

To the Editor of THE LANCET.

SIR,—I have during the past two months attended, in a well-marked and rather severe attack of typhoid fever, a woman aged seventy-six. She has made a good recovery.

Yours truly,

Burton-on-Trent, Sept. 25th, 1878. HENRY E. BRIDGMAN.

ST. BARTHOLOMEW'S HOSPITAL MEDICAL SCHOOL.

IN the Students' Number the total perpetual fee at St. Bartholomew's Hospital was erroneously stated to be £140 12s. It should have been £138 12s, or a single payment of £131 5s.

Mr. Pike.—The question is not one of law, but custom. The protest must be made just before being sworn, and it must take the form of a simple refusal to answer questions which aim to elicit the opinion of witness as a medical expert. The evidence to facts is compulsory. For example, the witness must describe post-mortem appearances; but he may refuse to state what, in his opinion, was the cause of death. The limit must, however, be defined by the protest before being sworn.

CONTAGIOUS PNEUMONIA.

To the Editor of THE LANCET.

SIR,—I have noticed the letters &c. in THE LANCET on Pythogenic Pneumonia, and also Dr. Wm. Squire's paper, read before the Epidemiological Society in March last, on Epidemic Pneumonia. As a small contribution to the subject, I may add, that sorters of raw alpaca, mohair (goat's-hair), camel's-hair, &c. &c., are often attacked by a rapidly fatal disease of this kind. It is sometimes fatal from collapse in from fifteen to twenty-four hours: more frequently reaction comes on, and, if followed by pulmonary congestion, pleural and pericardial sanguineous exudations, and death about the fourth day. If it goes on for a week, recovery generally takes place. These effects are only the local manifestations of a specific septicæmia, caused by the inhalation of a septic poison, developed by bacteria from decomposing animal matter within hard-pressed bales. Exposure to air for a few hours dissipates the poison, or renders it perfectly innocuous. It is closely allied to many other bacterial products from the putrid decomposition of different substances, which, introduced in various ways into the blood, produce different kinds of septicæmic diseases, such as surgical and puerperal septicæmia, typhoid fever, splenic fever (malignant pustule), infective pneumo-enteritis (typhoid) of the pig, typhus of the horse, &c. &c., in all of which the blood abounds with very similar but different animal organisms.

Yours &c.,

Bradford, Sept. 21st, 1878. J. H. BELL, M.D.

ERRATUM.—In Dr. Dunlop's article on Yellow Fever, in THE LANCET of Sept. 7th, page 323, sixth line from bottom of second column, for "through," read *things*.

COMMUNICATIONS not noticed in the current number shall receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Callender, London; Dr. Sedgwick Saunders, London; Dr. John Williams, London; Dr. Goodhart, London; Dr. R. Heath, St. Leonard's-on-Sea; Mr. Greenway, Plymouth; Dr. R. Campbell, Lewisham; Dr. R. Neale, London; Dr. Barron, Southport; Dr. Weir, Leicester; Dr. Allshorn, London; Dr. Napier, Dunbar; Dr. Eade, Norwich; Dr. Dougal, Strathaven; Mr. Barron, Sunderland; Dr. Hull, New York; Dr. Ray; Dr. Cavafy, London; Mr. Wright, Cranbrook; Mr. Holt, Glasgow; Mr. Ormond, Wantage; Mr. Drew, Beckenham; Mr. Lee, Heckmondwike; Dr. Kesteven, Holloway; Mr. Berry, Penzance; Mr. Fisher, London; Mr. Cocks, Barnsley; Dr. Hayslet, Worcester; Mr. Pollard, Shaw; Dr. Moss, Rothwell; Dr. Bell, Bradford; Dr. J. F. Oliver, Durham; Mr. Dobson, Clifton; Mr. Hopecroft, Dorking; Dr. Paulson, Loughborough; Surgeon-Major Smith, Bristol; Dr. Lee, Cyprus; Dr. Bridgman, Burton-upon-Trent; Dr. Dale; Dr. Pirrie, Port Rolloth; Dr. Johnston, Sheffield; Dr. Merryweather; Messrs. Browne and Co.; Dr. Gramshaw; Mr. Frost, Hartshill; Mr. T. Macaulay, Kibworth; Mr. Kearney; Mr. Jackson; Mr. Jones; Dr. Norman, Middlesborough; Messrs. Wyman and Co.; Mr. Marsden; Dr. Chartres, Arcachon; Mr. Farren; The Registrar-General of Edinburgh; E. G.; H. M. S.; M.B., C.M.; E. G.; L.R.C.P.I.; C. M.; A. G. L.; Tint; R. H.; G. F. W.; Medicus, Weymouth; R. L.; F. D. L.; S. W. A.; Justice; Z.; The Registrar-General of Births &c.; M. A.; X. Y. Z.; M.R.C.S.E.; Dum Spiro Spero; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Sawyer, Darlington; Mr. Thompson, Hastings; Messrs. Ladd and Son, Canterbury; Dr. Shapter, Exeter; Mr. Cressey, Hertford; Mr. D. Moses, Market-Drayton; Mr. Wayte, Henley; Dr. Taylor, Cardiff; Mr. Keyworth, Lincoln; Mr. Pothecary, Jersey; Mr. Wood; Mr. Jenkinson; Mr. Brown; Messrs. Wyld and Wilson; Mr. Parry; Dr. Prior, St. Albans; Mr. Wraith; Mr. Wilson, Derby; Mr. Howard; Mr. Roberts, Alfreton; Mr. Turner; Mr. Kenyon; Dr. Martin; Mr. Day; Mr. Gardiner; Mr. Hillman; Mr. Sandell; Mr. Thompson, Clondalkin; Dr. Brady, Derby; Mr. Mason; Mr. Rowley; Mr. Campbell; Messrs. Gilder and Co., Barnsley; Dr. Wicks, Bicester; Dr. Worger; Dr. James; F. R.; M.R.C.S., London; X. L.; M.D., Edinburgh; E. C., Poplar; Medicus, Accrington; Delta; H. F. E.; L.R.C.P.; M.D., L.R.C.P.; J. D. C.; W. H. I.; A. C. J. S.; Medicus, Tamworth; M.R.C.S., Ventnor; T. L.; M.D., Norwich; C. A. B.; M.D., Acton; X. Y. Z, Syston; M.D., Liverpool; Doctor; Bang; Surgeon, Devonport; 87; Medico; A. L., Barnsbury; A. H. H.; Medicus; Student, Paddington; L. M.; A. B.; A. M. X., York; Beta; H. N., Winchester; A. G. H.

Madras Mail, White Mountain Echo, Colonies and India, Banffshire Journal, Guy's Hospital Gazette, Derby Mercury, Birmingham Daily Post, Night and Day, Macclesfield Courier, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, SEPT. 26TH, 1878.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sep. 20	29·83	W.	48	50	86	60	47	0·04	Cloudy
,, 21	30·17	WNW	40	52	90	61	43	..	Fine
,, 22	29·91	S.	53	57	..	59	49	..	Cloudy
,, 23	29·45	N.W.	48	50	76	60	47	..	Cloudy
,, 24	29·60	N.W.	42	43	79	60	40	..	Cloudy
,, 25	29·38	WSW	50	50	73	60	42	..	Cloudy
,, 26	29·26	N.	46	49	85	59	45	0·04	Foggy

Medical Diary for the ensuing Week.

Monday, Sept. 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, Oct. 1.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.

Wednesday, Oct. 2.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimen: Fleshy Mole, by Dr. Godson.—Paper: Dr. Herman, "Remarks on the Treatment of Pregnancy complicated with Cancer of the Genital Canal."

Thursday, Oct. 3.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Oct. 4.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Oct. 5.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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